

United States Department of the Interior Bureau of Land Management

Environmental Assessment UT- 100-08-EA-04
April 2008

Ten-Year Permit Renewals for Goat Ranch, Cottonwood, and Cane Beds Grazing Allotments

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**RENEWAL OF TEN-YEAR TERM GRAZING PERMITS
FOR THE
GOAT RANCH, COTTONWOOD, AND CANE BEDS ALLOTMENTS**

EA NUMBER: UT-100-08-EA-04

**PROJECT TYPE:
Renewal of Term Grazing Permits**

**LOCATION:
Goat Ranch Allotment
Washington County, Utah: T. 42 & 43 S., R. 9 1/2 & 10 W.
Kane County, Utah: T. 43 & 44 S., R. 9 W.**

**Cottonwood Allotment
Washington County, Utah: T. 43 S., R. 9 1/2 W.
Kane County, Utah: T. 43 & 44 S., R. 9 W.**

**Cane Beds Allotment
Mohave County, Arizona: T. 41 & 42 N., R. 6 W.**

**PREPARATION DATE:
April 2008**

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1 PURPOSE AND NEED FOR ACTION

This Environmental Assessment (EA) has been prepared to analyze a proposal by the St. George Field Office of the Bureau of Land Management (BLM) to renew ten-year term grazing permits for the permit holders operating on the Goat Ranch, Cottonwood, and Cane Beds Allotments.

The three grazing allotments addressed in this EA are located on approximately 13,320 acres of BLM-administered public land along the Utah and Arizona state borders (**Figure 1-1**). Portions of the Goat Ranch and Cottonwood Allotments are located in both Washington and Kane Counties, Utah; some acreage of the Cottonwood Allotment is also located within Mohave County, Arizona. The Cane Beds Allotment is located entirely in Mohave County, Arizona. The allotments were grouped for analytic purposes in a single EA, based on geographic proximity and similar resource issues.

Under an *Agreement for Administration of Livestock Grazing between the Arizona Strip, Kanab, and St. George Field Offices and the Grand Staircase Escalante National Monument*, signed in July of 2000, administration of livestock grazing on the Goat Ranch, Cottonwood, and Cane Bed Allotments was assigned to the St. George Field Office. The agreement stated that the Utah Rangeland Health Standards and Guidelines would be used for field assessments, as a basis for permit renewals and compliance with the National Environmental Policy Act (NEPA) for these allotments.

The potential impacts to the human environment that may result from the federal action of renewing grazing permits for a ten-year term are disclosed in this EA, as required by NEPA. The EA assists the BLM in project planning and ensuring compliance with NEPA, and in making a determination as to whether any “significant” impacts could result

from the analyzed actions. “Significance” is defined by NEPA at 40 CFR Part 1508.27.

If the decision maker determines that this project has significant impacts following the analysis in the EA, then an Environmental Impact Statement (EIS) would be prepared for the project. If no significant impacts are identified beyond those already addressed in the applicable Resource Management Plan (RMP), a Finding of No Significant Impact (FONSI) and Decision Record may be signed for the EA approving the alternative selected.

Chapter 1 of this EA contains the purpose of and need for the project and includes a description of the issues driving the analysis. A description of the alternatives is presented in Chapter 2. Chapter 3 describes the existing resource conditions (i.e., the affected environment). Chapter 4 discloses the environmental effects of implementing the alternatives. A summary of public involvement is included in Chapter 5. The appendices provide supplemental detailed information regarding this project and the resources in the project area. Additional documentation for this EA can be obtained from the St. George Field Office.

1.1 Background

Rangeland Health Assessments, discussed later in this document, were completed for the Cane Beds and Cottonwood Allotments in 2006 and for the Goat Ranch Allotment in 2007. The assessments were completed by an Interdisciplinary Team (ID Team) comprised of BLM specialists from the St. George Field Office and the Kanab Field Office (for the Goat Ranch Allotment assessment only). BLM notified other federal, state, and local governmental agencies, interest groups, and the public about the field assessments, through information posted on 3/27/ 2006 in the Public Room of the St. George Field Office and through a public web page, the Environmental Notification Bulletin Board (ENBB), hosted by the Utah State Office of BLM. A BLM point of contact was identified in the postings

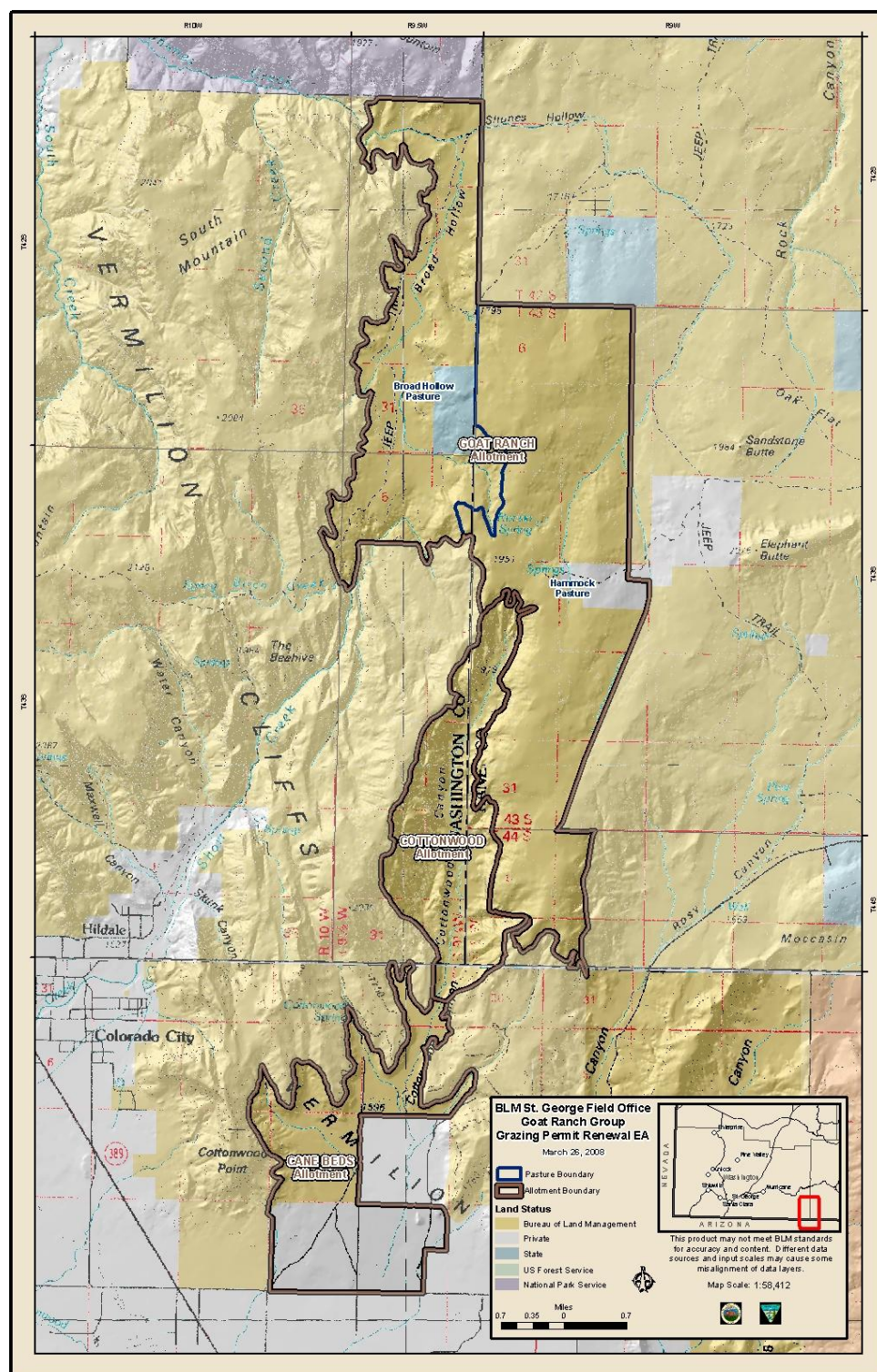


Figure - . Allotment Location Map, Showing Land Status, Boundaries, and Pastures.

for additional information and the public was invited to participate in the field assessments. No other participants, other than some of the grazing permit holders, elected to do so (see Chapter 5 for additional details on public involvement in the NEPA process). Lands administered by the State of Utah and some private lands are included in the Utah allotments; no management actions are identified for these lands as BLM does not have jurisdiction.

1.2 Need for the Proposed Action

The need for action is based on BLM's evaluation of resource conditions conducted during Rangeland Health Assessments in 2006 and 2007. Completion of these assessments is needed for development of an EA and renewal of term grazing permits. The results of the assessments indicated that current livestock management is meeting Utah's Standards for Rangeland Health and Guidelines for Grazing Management (Utah Standards and Guides; BLM 1997). The assessments did not indicate the need for any changes.

Since 2000, most grazing permits have been renewed under the authority of a "rider" to Public Law 106-113, Sec. 123 of the Consolidated Appropriations Act, Appendix - H.R. 3423, Title 1). The "rider" authorized the Secretary of the Interior to renew term grazing permits that would have the same terms and conditions as the expiring permit, pending processing of such permits in compliance with all applicable laws and regulations. This permit renewal authority remains in force until 2009. BLM's goal is for all permits to have been analyzed through the NEPA process by the time the legislation expires. Once the NEPA process has been completed for a given grazing permit renewal, the current permit issued pursuant to the legislative "rider" authority would be cancelled and a new permit would be issued for a ten-year period, based on the NEPA analysis.

1.3 Purpose of the Proposed Action

The purpose of the federal action is to continue to authorize livestock grazing through renewal of term grazing permits, while maintaining rangeland health conditions to be consistent with the Utah Standards and Guides. Livestock grazing is an accepted and valid use of public lands, authorized by several federal laws, including the Public Rangelands Improvement Act, Taylor Grazing Act, and the Federal Land Policy and Management Act (FLPMA).

Livestock grazing on public lands is managed according to BLM grazing regulations (43 CFR Part 4100). The BLM is responsible for determining the appropriate levels and management strategies for livestock grazing in the three allotments. Grazing permits issued must be in compliance with the multiple use and sustained yield concepts of FLPMA and implementing regulations that establish the Fundamentals of Rangeland Health (43 CFR Part 4180) and Utah's Rangeland Health Standards.

1.4 Conformance with BLM Land Use Plans

The Proposed Action and alternatives for these allotments are subject to management goals and decisions contained in the following BLM land use plans: the 1999 St. George Field Office RMP, the Vermillion Resource Management Framework Plan (1981) for the Kanab Field Office, and the Arizona Strip RMP (2008). Stated objectives for rangeland management from the St. George RMP (pg. 2.32) include:

- a) *Promotion of healthy, sustainable rangeland ecosystems that produce a wide range of public values such as wildlife habitat, livestock forage, recreation opportunities, clean water, and safe and functional watersheds;*
- b) *Restoration and improvement of public rangelands to properly functioning condition, where needed;*

- c) *Providing for sustainability of the western livestock industry and communities that are dependent upon productive, healthy rangelands;*
- d) *Ensuring public land users and stakeholders have a meaningful voice in establishing policy and managing public rangelands.*

The Proposed Action would be in conformance with the St. George RMP's Range Decisions GZ-01 and GZ-11 found in the RMP Record of Decision (BLM 1999, pps. 2.32 and 2.34).

- Range Decision GZ-01 relates to the Standards for Rangeland Health and Guidelines for Grazing Management for BLM Lands in Utah, approved by the Secretary of the Interior on May 20, 1997 (BLM 1997). BLM applies these standards and guides to its grazing management program throughout Washington County.
- Range Decision GZ-11 provides a list of guidelines applied to grazing management in order to help achieve approved standards on public lands within Washington County.

The Kanab Field Office's Vermillion Resource Management Framework Plan III (MFP III approved in April 1981) identified the Goat Ranch and Cottonwood allotments as being open for livestock grazing, under the authority of the Taylor Grazing Act, FLPMA, and federal regulations under 43 CFR 4100. The Proposed Action is in conformance with Vermillion MFP III Decisions RM1.1.; RM1.3; RM 1.4; RM 2.2.; RM 2.9; RM3.3; and WL 2.2. The alternatives analyzed in this EA would satisfy these MFP decisions. None of the alternatives would conflict with other decisions in the MFP III.

The Arizona Strip RMP, for which a Record of Decision was signed in 2008, made the following land use allocation for all planning areas (Proposed Plan/FEIS 2-151):

On BLM lands, all allotments would continue to be classified as available for grazing by livestock under the principle of multiple use and sustained

yield, except where specifically noted.

The Arizona Strip RMP also provides for the continuation of interdisciplinary allotment evaluations, review of resource conditions for conformance to established rangeland health standards and guidelines, and the implementation of changes to grazing management systems to achieve resource objectives.

The Proposed Action would not conflict with decisions in BLM's three land use plans related to multiple use management of public lands and resource values in Washington and Kane Counties, in Utah and Mojave County in Arizona.

1.5 Relationship to Statutes, Regulations, or other Plans

This section contains information about other legal, regulatory, and land use planning decisions that relate to grazing on these allotments. The Proposed Action is consistent with all applicable federal laws, regulations, and policies, including the following:

- Endangered Species Act of 1973, as amended
- FLPMA of 1976 (43U.S.C. 1701 et seq.)
- Public Rangelands Improvement Act of 1978
- Taylor Grazing Act of 1934
- National Historic Preservation Act of 1966
- Executive Order 13186-“Responsibilities of Federal Agencies to Protect Migratory Birds”

The Fundamentals of Rangeland Health and Utah's Standards and Guides (43 CFR Part 4180) address watersheds, ecological condition, water quality, and habitat for special status species. These resources are addressed in the ID Team Analysis Record Checklist (ID Team Checklist; Appendix A) and, if potentially impacted, are analyzed in Chapter 4 of this document.

BLM manages the Goat Ranch Allotment in the “Improve” management category and an Allotment Management Plan (AMP) is in effect for it. AMPs are written to set objectives for range management, including improvement of condition and trend. Both the Cottonwood and Cane Beds Allotments are “Custodial” allotments that do not have AMPs in place.

Consistency with State and Local Plans

BLM collaborates with other agencies to the extent practical to achieve consistency between plans that may address the same resources.

Livestock grazing is consistent with management objectives for federally-managed lands in Washington County that were identified in the Washington County General Plan, adopted in 1994. This Plan identifies lands within two of the allotments as open for economic uses such as livestock grazing (Washington County 1994).

The Kane County General Plan, adopted in June 1998, describes as one of the purposes and intents of its public land policy to be “the continued grazing use of federally-managed land”. The General Plan goes on to state that “[t]he expectation for continuation of the livestock industry in the County is essential to support economic stability and to preserve the custom and culture of the citizens” (p. 123).

The Mojave County General Plan, adopted in 1994, does not specifically address livestock grazing on federal lands, but this action does not conflict with other decisions in that plan.

The Proposed Action is also consistent with other plans, including water quality and watershed management plans, regional plans for game and non-game wildlife management, and the Utah State Comprehensive Outdoor Recreation Plan.

NEPA Analyses that Limit the Scope

This EA is tiered to the *Hot Desert Grazing Management Final Environmental [Impact]*

Statement (BLM 1978); the *Kanab/Escalante Grazing Management Final EIS* (BLM 1981); the St. George Field Office RMP/EIS (BLM 1995, 1998); Kanab Field Office Draft RMP/DEIS (BLM 2007a); and Arizona Strip RMP/EIS and Record of Decision (BLM 2008b). Each of these EIS- level NEPA analyses evaluated the environmental impacts of BLM’s livestock grazing management program in Washington and Kane Counties, Utah and Mohave County Arizona. The resource impacts that could result from a range of livestock grazing alternatives, including a No Grazing Alternative, were disclosed in these prior NEPA analyses. The analyses of the No Grazing Alternative from each of these statements are incorporated by reference in this EA.

1.6 Identification of Issues

Issues for consideration in this analysis were determined by input from the BLM ID Team and results of the rangeland health assessments. The public was notified of BLM’s intent to prepare an EA for the proposed term permit renewals and invited to identify issues for analysis during a scoping period initiated on November 10, 2007. Notification was made through postings in the St. George Field Office’s Public Information Room and on the Utah ENBB, and through informal contacts with permit holders, other governmental entities, and interested parties. No issues were identified by other governmental entities or the public during scoping for the NEPA analysis.

The BLM ID Team, which included resource professionals from the St. George and Kanab Field Offices and the Arizona Strip District Office, reviewed the Proposed Action and evaluated the potential effects to the human environment in order to identify issues that need to be carried forward for analysis. Documentation of that review is attached as Appendix A – ID Team Checklist – which contains all resources considered by the ID Team. Qualitative assessments of rangeland

health, in association with quantitative monitoring and inventory information, were used to assess any potential resource concerns on upland rangelands or in riparian zones. The results of the assessments conducted on the allotments during 2006 and 2007 were used during the issue identification process (BLM 2007c; BLM 2006a; 2006b).

Particularly important in determining relevant issues is consideration of “Critical Elements of the Human Environment.” These elements are subject to requirements specified in statute, regulation, or executive order and must be considered in all EAs (BLM 1987).

The ID Team Checklist (Appendix A) summarizes the effects of the proposed action and alternatives on the critical elements, as well as other issues of concern. Relevant issues are carried through the analysis process in the EA. These are identified as “potentially impacted” on the ID Team Checklist (Appendix A). Issues that are “not present” are indicated, as are those that are present in the project area but that would not be measurably affected by the proposal. A rationale for dismissing each resource from further analysis is given on the checklist.

Critical elements that are not present in the analysis area, and therefore will not be analyzed in this EA, include the following: environmental justice populations or issues; prime or unique farmlands; floodplains; Native American religious concerns; threatened, endangered, or candidate plant species; hazardous or solid wastes; and wild and scenic rivers.

Other resources that also are not present include: BLM/State Sensitive plant species (Utah and Arizona); energy production issues; wild horses and burros; and lands with wilderness characteristics.

Critical elements of the human environment that may be present, but that would not be measurably affected by the Proposed Action or alternative, are not carried forward for

analysis in this EA. These include the following: air quality; areas of critical environmental concern (Canaan Mountain ACEC); cultural resources; water quality (drinking and ground); wilderness and wilderness study areas (WSAs).

The Goat Ranch and Cottonwood Allotments overlap with the Canaan Mountain ACEC (**Figure 1-2**) in Washington County. This 31,000 acre ACEC was designated in 1999, through the St. George Field Office RMP, to provide special management attention to the special values of the area. These values included the spectacular scenery of Canaan Mountain and the adjacent Vermillion Cliffs, opportunities for quality primitive recreational experiences, and prehistoric and historic period cultural resources. No new range improvements or changes in livestock grazing management are proposed for the Goat Ranch or Cottonwood Allotments that could impact the values of the ACEC under either alternative considered in the EA. Therefore, this critical element was not carried forward for detailed study.

Although cultural resources, including those that are eligible for listing to the National Register of Historic Places (NRHP), are present in the allotments, this critical element was not carried forward for detailed analysis in this EA, for the following reasons. No new rangeland management facilities or changes in livestock management are proposed that could directly or indirectly impact significant cultural resources for the allotments. BLM maintains a database of cultural resources that occur within the allotment areas and collects site condition data, through monitoring by BLM archeologists and others, including volunteer site stewards. Monitoring has not indicated that any NRHP properties within these allotments are being measurably or adversely affected by livestock grazing at current stocking levels or under current grazing management systems.

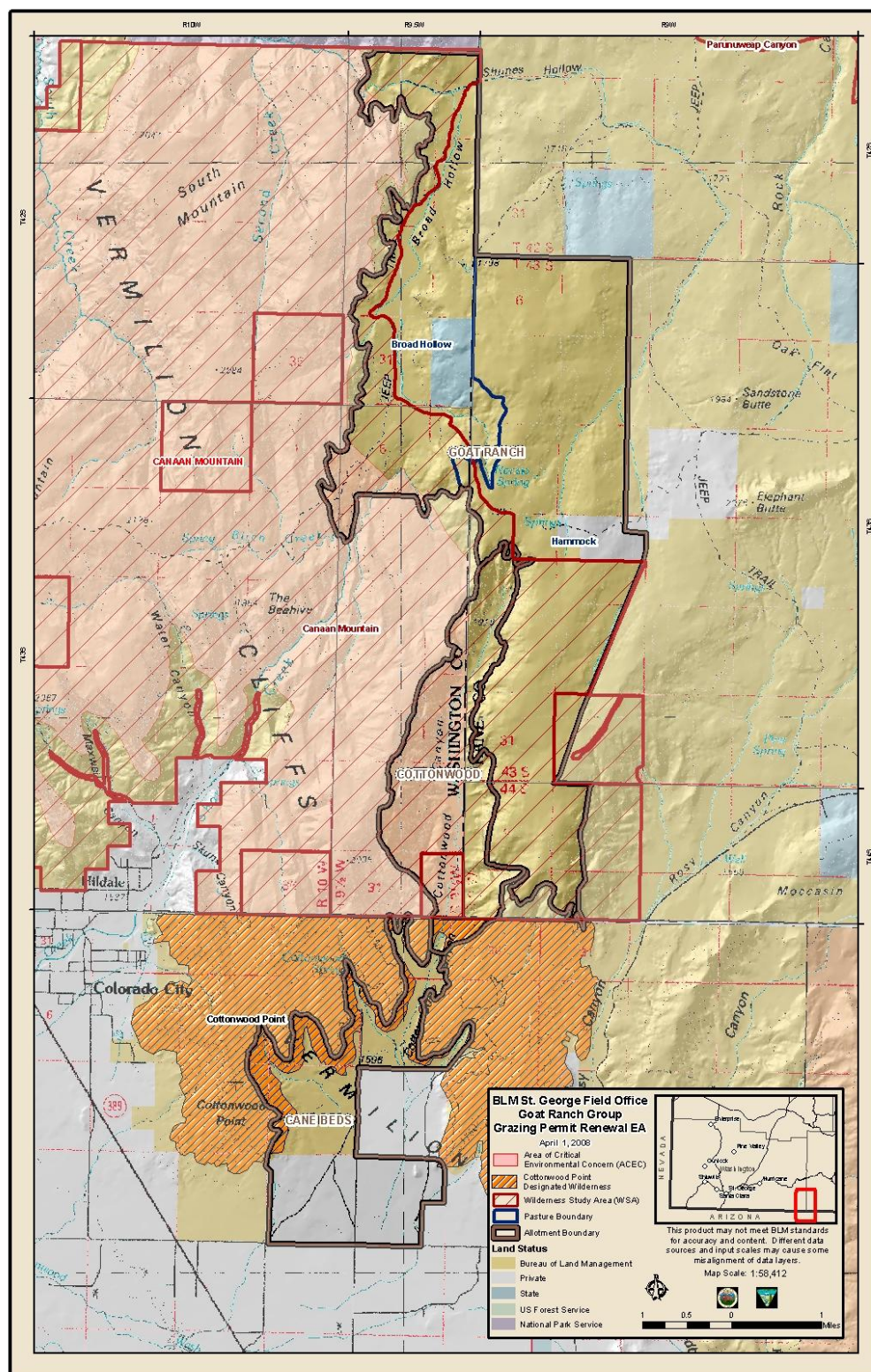


Figure 1-2. Map Showing Allotments, ACEC, Wilderness, and WSA Boundaries

An estimated 600 acres of the Cottonwood Point Wilderness in Arizona is within the Cane Beds Allotment (**Figure 1-2**). The Canaan Mountain WSA overlaps the Goat Ranch and Cottonwood Allotments. The Wilderness Act of 1966 identified livestock grazing as a valid historic use of wilderness areas that could continue after Congressional designation of an area as wilderness. Activities or projects in wilderness areas must be consistent with management direction from the applicable Wilderness Management Plan. As no range improvements or other changes to livestock grazing management are proposed for the Cottonwood Point Wilderness under the Proposed Action and alternative, both would be consistent with the Wilderness Management Plan and neither would impair wilderness values.

Wilderness study areas are managed so as to protect wilderness values and the suitability of the area for Congressional designation as wilderness. No new range improvements or changes in livestock grazing management that could impact wilderness values in the Canaan Mountain WSA are proposed under any alternative considered in the EA. Therefore, these critical elements are not carried forward to detailed study here.

Other resource values that are present but not affected by the project include recreational uses of public lands; woodlands/forests; visual resources; geological or mineral resources; and fuels/fire management issues.

1.7 Issues Identified for Analysis

The primary issues of concern are potential effects on threatened, endangered or candidate animal species; wetlands/riparian zones; rangeland health/livestock grazing; soils; vegetation; BLM/State Sensitive wildlife species; and socio-economic values. These issues are summarized below.

1.7.1 Issues Related to Critical Elements

Threatened, Endangered, or Candidate Wildlife Species and Migratory Birds

Improper grazing management practices can affect population numbers and the quality of habitat available for species listed under the authority of the federal ESA or protected under the Migratory Bird Treaty Act. Federally-listed species that may use the allotments include the California condor (*Gymnogyps californianus*) and Mexican spotted owl (*Strix occidentalis lucida*). Designated critical habitat for the Mexican spotted owl, a federally-listed threatened species, exists in the western portion of the Goat Ranch Allotment, and several areas within the Cane Beds Allotment have been identified as having potential Mexican spotted owl habitat.

Wetlands/Riparian Zones

Inappropriate levels of livestock grazing in riparian zones can the ecological functions of these environmentally sensitive areas. There are five springs within this group of allotments; two of the springs support riparian habitat. Any livestock-related effects on these zones are disclosed in Chapter 4.

Noxious Weeds and Invasive Species

The Rangeland Health Assessment for the Goat Ranch Allotment indicated that an infestation of a noxious weed in Utah, Scotch thistle (*Onopodium acanthium*), is present in the Broad Hollow Pasture. Cheatgrass (*Bromus tectorum*), an invasive, non-native grass species, is also present in the allotments. Factors that may have contributed to the occurrence of these invasive species are analyzed in the EA.

1.7.2 Issues Related to Other Resource Values

BLM/State Sensitive Species and other Wildlife

Improper grazing management practices can affect population numbers and the quality of

habitat available for species considered at risk by the state wildlife managers. Several State-Sensitive Species may occur in this group of allotments (Utah and/or Arizona). The effects of the proposed term permit renewals on other wildlife and habitat, including critical winter range for mule deer, are also described in the EA.

Vegetation

Based on the Rangeland Health Assessments and recent monitoring data, vegetation is generally responding well to current livestock management practices. However, shrubs, particularly big rabbitbrush (*Chrysothamnus nauseosus*) now dominate an 800 acre area of the Broad Hollow Pasture of the Goat Ranch Allotment. Factors that may have contributed to this situation are disclosed in the EA.

Socio-economic Values

Public land grazing allotments continue to provide tangible economic and social benefits to individual permit holders and contribute some revenues to the local and regional economy.

1.8 Summary

This chapter has presented the purpose of and need for action, as well as the relevant issues. These issues will be addressed in the Affected Environment and Environmental Consequences chapters of this document

2 DESCRIPTION OF ALTERNATIVES

This chapter contains a description of the Proposed Action and other alternatives. The purpose of the federal action is to license livestock grazing, through term permit renewals on the three public land allotments, while providing appropriate levels of resource protection to maintain public rangeland health. All allotments were found to be functioning properly under the current livestock management. No changes in the terms and conditions of the grazing permits were requested by the livestock operators on the three allotments evaluated in this EA.

Management Categories

The Cottonwood and Cane Beds Allotments are managed by BLM as “Custodial” allotments. The Goat Ranch Allotment is managed as an “Improve” category allotment. Custodial allotments do not require intensive management of livestock grazing for one or more of the following reasons: the allotments are small and/or are comprised of relatively high percentages of non-federal land over which BLM has no jurisdiction; existing resource conditions on the public lands within the allotment do not require management changes; and the potential for resource condition improvement are limited by natural variables, such as soil types, precipitation rates, etc. Rangeland health data collection, including frequency data, is conducted on Custodial allotments every 10 years, unless resource conditions warrant more frequent evaluations. Monitoring of rangeland health occurs on a regular basis.

“Improve” category allotments require more intensive livestock management, based on resource conditions and the potential for improvement. Livestock grazing in these allotments are often guided by an AMP.

2.1 Alternative A - Proposed Action

The objective of this alternative is to allow livestock grazing to continue under the currently licensed terms and conditions for the Goat Ranch, Cottonwood and Cane Beds Allotments. The Rangeland Health Assessments for the three allotments indicate the ecosystems are functioning properly and are meeting the standards. No changes in the seasons of use or number of livestock would be authorized and grazing would be licensed as shown in **Figure 2-1** for the three allotments. General information on livestock grazing management for each of the allotments is provided below. Trend and utilization data are included in Chapter 3 of this EA.

Riparian and upland rangeland health assessments were conducted on these allotments in 2006 and 2007. BLM resource specialists would continue to monitor and assess rangeland conditions to ensure that conditions continue to meet Utah Standards and Guidelines for Rangeland Health.

Goat Ranch Allotment

The Goat Ranch Allotment is comprised of approximately 9,500 acres of BLM-managed public land and is in the “Improve” management category. The allotment includes approximately 300 acres of State of Utah administered land and 250 acres of private land. Under the Proposed Action, a ten-year term grazing permit would be issued that licenses grazing use for 122 head of cattle during a season of use from June 1 to October 15 annually. Since 1985, an AMP has been in place that authorizes a two pasture rotation grazing system for the Goat Ranch Allotment. The AMP established a grazing schedule of pasture rotation designed to improve the poor range conditions detected during a 1977-78 range survey completed by BLM and meet the stated objectives of the AMP. The allowable use level for the allotment is 50% utilization of key species.

Figure -. Livestock Grazing Use under the Proposed Action and No Action Alternatives.

Allotment Name	Number of Livestock	Kind of Livestock	Season of Use	AUMs*	Acres of Public Land
Goat Ranch	122	cattle	06/01 to 10/15	494 & 174 suspended	9,500
Cottonwood Custodial	18	cattle	10/16 to 05/31	135	2,255
Cane Beds Custodial	7	cattle	3/01 to 2/28	84	1,565

* Animal Unit Months

No changes in current permitted use or to the terms and conditions of this grazing permit are proposed.

Cottonwood Allotment

The Cottonwood Allotment is comprised of approximately 2,255 acres of BLM-administered public land (2155 in Utah; 100 in Arizona). No state or private lands are included in this allotment. Under the Proposed Action, a ten year term grazing permit would be issued that licenses 18 head of cattle during a season of use permitted is from October 15 to May 31. Resource conditions support continued management of this allotment as a Custodial allotment. No changes to the current permitted use or to the terms and conditions of this grazing permit are proposed.

Cane Beds Allotment

The Cane Beds Allotment is comprised of approximately 1565 acres of BLM-managed public land in Arizona. Approximately 1170 acres of private land are also within this allotment. This allotment is managed as a Custodial allotment. The Proposed Action would renew the ten year term grazing permit to license 7 head of cattle on a year -round basis, with no changes to season of use, licensed numbers or permit terms and conditions.

Range Improvements

No range improvements are proposed under this alternative. Existing range improvements would be maintained as needed.

Monitoring

BLM resource specialists would continue to monitor and assess rangeland conditions during the life of the term permits to ensure that conditions continue to meet Utah Standards and Guidelines for Rangeland Health. Range studies and monitoring would be conducted in accordance with BLM manual procedures and AMP requirements, if applicable.

2.2 Alternative B – No Action

Under the No Action alternative, BLM would not renew the term grazing permits for the three allotments at this time. Grazing use would continue as presented in **Figure 2-1** and under the AMP (for the Goat Ranch Allotment) until the current permits expire on February 28, 2014.

The grazing permits could be renewed when the current term permit expires. If, in the future, grazing permits were not renewed by their current expiration date, this alternative would not meet the purpose and need for action by failing to continue a permitted use on public lands under the multiple use and sustained yield mandates of FLPMA and other legislation.

Range Improvements

No range improvements are proposed under this alternative. Existing range improvements would be maintained as needed.

Monitoring

Rangeland health studies and monitoring would continue to be conducted as described above for the Proposed Action alternative.

2.3 Alternatives Considered but Eliminated from Further Analysis

An alternative for No Grazing, wherein livestock grazing would not be licensed on any of the three allotments, was not carried forward for detailed study for the following reasons.

NEPA requires that federal agencies study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources. No unresolved conflicts have been identified as a result of the Rangeland Health Assessments or resource monitoring that would require the complete elimination of grazing within the three allotments. Since

BLM has considerable discretion, through its grazing regulations, to determine and adjust stocking levels, seasons-of-use, and grazing management activities, the analysis of an alternative to entirely eliminate grazing is not needed. If, at some point in the future, monitoring indicates any of the allotments are not in compliance with the Rangeland Health Standards and Guidelines, administrative actions would be taken to modify the terms and conditions of the permit or to withhold the permit. The approved Standards for Rangeland Health and Guidelines for Grazing Management on Public Lands in Utah (approved in 1997) contain these strategies and have been used by the St. George Field Office to develop the Proposed Action.

A No Grazing alternative would be inconsistent with the intent of the Taylor Grazing Act which directs BLM to provide for livestock use of public lands, to adequately safeguard grazing privileges, to provide for the orderly use, improvement, and development of the range, and to stabilize the livestock industry dependent upon the public range.

An alternative that proposes to close the three allotments to grazing would also be inconsistent with the intent of FLPMA, which requires that public lands be managed on a “multiple use and sustained yield basis” (FLPMA Sec. 302 (a) and Sec. 102(7)). FLPMA includes livestock grazing as a principal or major use of the public lands. While BLM’s multiple use mandate from FLPMA does not require that all lands be used for livestock grazing, the removal of livestock grazing, absent identified resource conflicts that can only be resolved through closure to grazing, would be arbitrary and would not meet the principle of multiple use and sustained yield.

A No Grazing alternative would also not be in conformance with the management decisions and analysis in the St. George RMP/EIS (ROD-BLM 1999); the Vermillion

Management Framework Plan (MFP-1981), and the Arizona Strip RMP (ROD-BLM 2008). Implementation of the No Grazing alternative would require land use plan amendments to the St. George Field Office and the Arizona Field Office RMPs and the Vermillion MFP, because it is not in conformance with these land use plans which allocate forage in these allotments for livestock grazing.

Livestock grazing is and has been an important use of the public lands in Washington, Kane, and Mojave Counties for many years and is a continuing government program. Although the Council on Environmental Quality Guidelines for compliance with NEPA require that agencies analyze the “No Action alternative” in all EISs for purposes of this NEPA analysis, the “No Action alternative” is to continue the status quo which includes livestock grazing (*Council on Environmental Quality Forty Most Asked Questions, Question 3*).

3 AFFECTED ENVIRONMENT

In Chapter 1, the purpose of and need for the action were discussed and issues were identified. In Chapter 2, alternatives were set forth. This chapter discusses the current environmental conditions, providing the baseline for comparison of effects described in Chapter 4. Information for this chapter came from existing NEPA analyses and the most recent available data from the allotments.

3.1 General Setting

The Goat Ranch and Cottonwood Allotments lie on the border of Washington and Kane Counties in Utah and extend south to the Utah-Arizona state line, approximately 3 miles east of the small communities of Hildale in Utah and Colorado City in Arizona. The Cane Beds Allotment is located in Mohave County, Arizona and is situated approximately 1.5 miles east of Colorado City, Utah (refer to **Figure 1-1**).

The area is located within the Colorado Plateau physiographic province. The Colorado Plateau is drained by the Colorado River and its major tributaries, which include the Virgin River that flows through Washington County in Utah and Mojave County, Arizona.

The Colorado Plateau is a highly dissected landscape, characterized by flat mesas and deeply incised canyons that expose multi-colored sandstone, shale, and limestone bedrock units. Pinyon-juniper woodlands typically cover the mesa tops and canyon walls, with an understory of shrubs, forbs and grasses.

The regional climate is warm and semi-arid. Summers temperatures can be very hot, often above 100°F; winter daily high temperatures average around 60 degrees F. Storm types are of high intensity, but short duration during the summer months.

Monsoonal flows in late summer bring thunderstorms to the area that can result in localized flash flooding. Winter storm events are of lower intensity and longer duration. Most precipitation falls in the form of rain but some occurs as snow. Precipitation ranges, on average from 8 to 14 inches annually, with the driest months typically being May and June. The general area experienced below average amounts of precipitation between 1999 and 2003 and again in 2006, with slightly wetter conditions occurring in 2004 and 2005 (WRCC 2007).

3.2 Critical Elements of the Human Environment Brought Forward for Analysis

3.2.1 **Threatened, Endangered, or Candidate Wildlife Species and Migratory Birds**

The U.S. Fish and Wildlife Service lists 12 species as Threatened, Endangered, or Candidate species that could occur in southern Utah and the northern Arizona Strip. Four avian species listed under the ESA may infrequently use the general area of the Goat Ranch group of allotments. These species include the California condor, Mexican spotted owl, Southwestern willow flycatcher (*Empidonax trailii extimus*), and Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), described in greater detail below.

California condor

The California condor is a federally-listed endangered species throughout most of its range. These large birds feed on carrion and roost and nest in riparian areas with mature tree stands and in remote rocky terrain. They range over a wide area and could infrequently hunt and forage in Canaan Mountain and the Vermillion Cliffs. No nests, roosts, or special use areas for California condor have been identified in the

Goat Ranch, Cottonwood or Cane Beds Allotments.

California condors have been released from captive breeding programs into the Grand Canyon and Vermillion Cliffs areas.

Released birds are managed as an “experimental, non-essential population” by the U.S. Fish and Wildlife Service. These birds have been sighted in southern Utah, in Zion National Park and could use the three allotments for hunting and foraging.

Mexican spotted owl

The Mexican spotted owl was listed as a threatened species under the ESA in 1993, because of declining populations. The decline was attributed primarily to the loss of habitat and prey base as a result of timber management practices and catastrophic wildfires that have destroyed the closed canopy mixed conifer forests preferred by this owl in portions of its range.

The U.S. Fish and Wildlife Service approved a Recovery Plan for the Mexican spotted owl in 1995 and subsequently designated critical habitat for this species. The Recovery Plan identified several recovery units, the largest of which is the Colorado Plateau Recovery Unit. This unit encompasses suitable habitat types in the southern half of Utah and elsewhere on the Colorado Plateau. In the Colorado Plateau Recovery Unit, Mexican spotted owls appear to prefer steep-walled, rocky canyons. Mexican spotted owls have been observed in the canyons of Zion, Capitol Reef, and Grand Canyon National Parks. In the Colorado Plateau Recovery Unit, nesting

occurs in caves or on cliff ledges, in stick nests build by other birds, and in tree cavities. These owls consume a wide variety of prey, but commonly eat small to medium sized rodents, bats, other bird species, and reptiles.

Designated Critical Habitat for Mexican spotted owl exists in the western portion of the Goat Ranch Allotment (**Figure 3-1**). Despite having been designated by the U.S. Fish and Wildlife Service as Critical Habitat, the area would actually provide few opportunities for nesting, due to the lack of canyon habitat.

There are several canyons within the Cane Beds Allotment that have been identified by UDWR as having potential Mexican spotted owl nesting habitat, based on a Global Information System (GIS) predictive modeling (UDWR 2005). The model uses topographic and vegetative variables to predict where potential nesting habitat could be found. Within the Cottonwood Allotment, the model predicted that potential nesting habitat could be present in the Cottonwood Spring #1 Canyon and the canyon east of Cottonwood Point. Because these canyons are extremely steep with sheer and narrow rocky cliffs, they are inaccessible to livestock, and therefore, are not grazed. No nests, roosts, or special use areas for Mexican spotted owl are known to occur in the Goat Ranch, Cottonwood or Cane Beds Allotments.

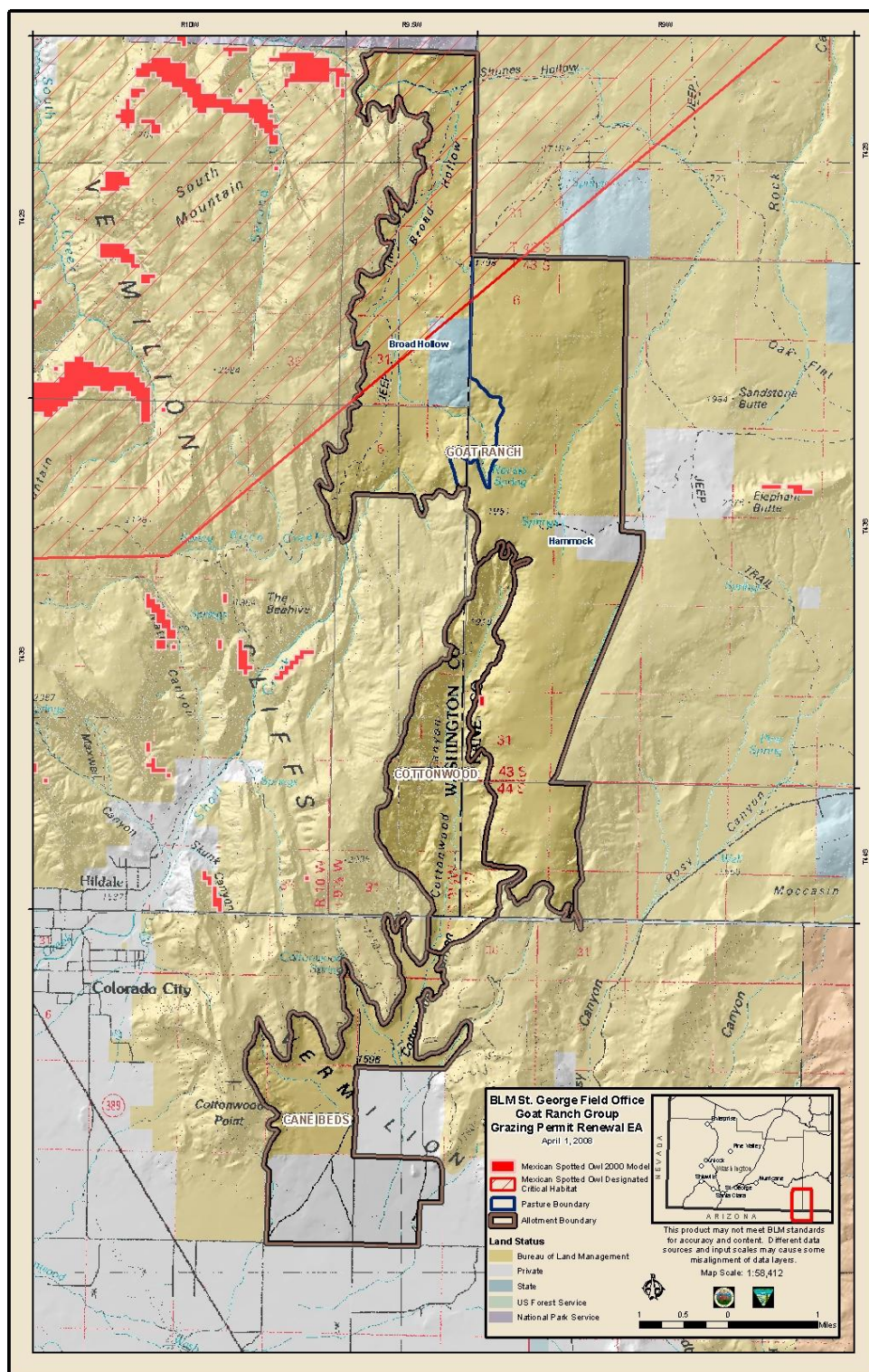


Figure 3-1. Mexican Spotted Owl Designated Critical Habitat and Potential Habitat

Southwestern Willow Flycatcher and

The Southwestern willow flycatcher is a small migratory bird that was listed as an endangered species in March 1995. Critical habitat was designated for this species in 1997 and a Recovery Plan prepared by the U.S. Fish and Wildlife Service in 2002.

The Southwestern willow flycatcher nests primarily in riparian areas where thickets of dense shrubs or trees are found. The birds appear to prefer an over-story of large trees for nesting. During the Rangeland Health Assessments, BLM biologists evaluated the five springs within the allotments. Only two of the springs support riparian habitat and both were evaluated for suitability to provide nesting habitat for the Southwestern willow flycatcher. The assessments considered a number of geological and biological factors, including riparian vegetation diversity, composition, and age classes. The findings of the riparian assessments were that neither riparian area could provide suitable nesting habitat for Southwestern willow flycatcher. No flycatchers have been observed in any of the allotments.

Western Yellow-billed Cuckoo

The Western yellow-billed cuckoo is a Candidate species under the ESA, largely due to habitat loss throughout its range. This species also nests in riparian habitats, similar to those preferred by the Southwestern willow flycatcher. The riparian assessments completed for the three allotments indicated that no suitable nesting habitat for Western yellow-billed cuckoos is present here. No yellow-billed cuckoos have ever been sighted in these allotments.

Migratory Birds

Migratory birds are afforded protection under Executive Order 13186 and the Migratory Bird Treaty Act. A variety of migratory birds (raptors, waterfowl, and

small birds) may be found in these allotments on a seasonal basis. Some of the more common species include golden eagle, American kestrel, red-tailed hawk, turkey vulture, mourning doves, rough-winged swallow, mountain bluebird, Western bluebird, and white-throated swift. All of these species may breed in the area, then migrate out, or simply remain in the area for short periods of time during migration.

The three allotments may receive infrequent use by American bald eagles (*Haliaeetus leucocephalus*), a migratory winter visitor (November to April) in Washington County. Most use by bald eagles occurs around the several reservoirs along the Virgin and Santa Clara Rivers, with infrequent use occurring along prominent landforms, like the Hurricane Fault or Vermillion Cliffs. Bald eagles may hunt or forage along the Vermillion Cliffs, on a transient basis during the winter months. No nests or roost sites for bald eagles have been identified in the three allotments.

3.2.2 Wetlands/Riparian Zones

In general, riparian zones occur along streams, rivers, and desert washes and around springs, where the vegetation is influenced by the presence of surface or subsurface water and exhibits vegetation characteristics reflective of permanent water influence (Utah Standards for Rangeland Health and Guidelines for Grazing Management). In desert environments riparian areas are critical to the integrity of natural systems.

Vegetative species generally associated with riparian areas in the area include cottonwood (*Populus* spp.), Goodings willow (*Salix gooddingi*), coyote willow (*Salix exigua*), arrowweed (*Pluchea sericea*), tamarisk (*Tamarix* spp.), rabbitbrush, Russian olive (*Elaeagnus angustifolia*), and sedges.

No rivers or streams flow through the allotments. The Rangeland Health Assessments identified where riparian areas were present and evaluated conditions at the five springs within this group of allotments. The springs include: Goat and Cappies Rock Springs on the Goat Ranch Allotment, Stateline and Maiden Hair Springs on the Cottonwood Allotment; and Cottonwood Spring (**Figure 3-2**) on the Cane Beds Allotment. Riparian assessments were completed at the five springs (**Figure 3-3**) and evaluated hydrologic and vegetative variables and erosion potential, to determine whether or not the riparian areas were functioning properly. Three of the five springs (Goat, Stateline and Maiden Hair) had no surface water at their sources at the time of the assessments and supported very little riparian vegetation. Stateline and Maiden Hair Springs have been developed and are piped to water troughs and private homes, limiting the potential for riparian communities to be sustained around the spring sources. The assessments at Cappies Rock Springs and Cottonwood Spring indicated that riparian areas were being sustained and that all the criteria for a properly functioning riparian system were being met.



Figure 3-2. View of Cottonwood Spring, taken on 12/20/2007

3.2.3 Noxious Weeds and Invasive Species

Noxious Weeds: Scotch thistle infestation is present in one area of the Broad Hollow Pasture of the Goat Ranch Allotment. This plant is a non-native species that is considered a noxious weed in Utah. It is found virtually throughout the state in areas where soils have been disturbed. This species is unpalatable to livestock, in part because of its spiny leaves and rosettes, and is not grazed.

Invasive Species: Non-native warm season grasses, such as cheatgrass and red brome (*Bromus rubens*), were introduced to public rangelands in West during the late 19th century, through domestic livestock. These species are now found throughout Washington and Kane Counties in Utah and Mojave County, in Arizona, including areas that have never been grazed. Wildfires have also encouraged the spread of these non-native grasses, as they flourish in post fire conditions, outcompeting native species.

3.3 Other Resources/Issues Brought Forward for Analysis

In addition to the Critical Elements of the Human Environment described above, other resources are screened for impacts in NEPA analyses by BLM (e.g., soils, vegetation). Appendix A contains a complete list of the resources considered for this EA. Resources that are either not present or are present but not affected are listed in Section 1.7 and Appendix A and are not analyzed in detail in this EA. Those resources determined by BLM resource specialists to be present and which may be affected by the Proposed Action and alternatives are described below and analyzed in Chapter 4.

3.3.1 Livestock Grazing

Authorized use for the allotments is displayed in **Figure 2-1**. The Goat Ranch Allotment is managed as an “Improve”

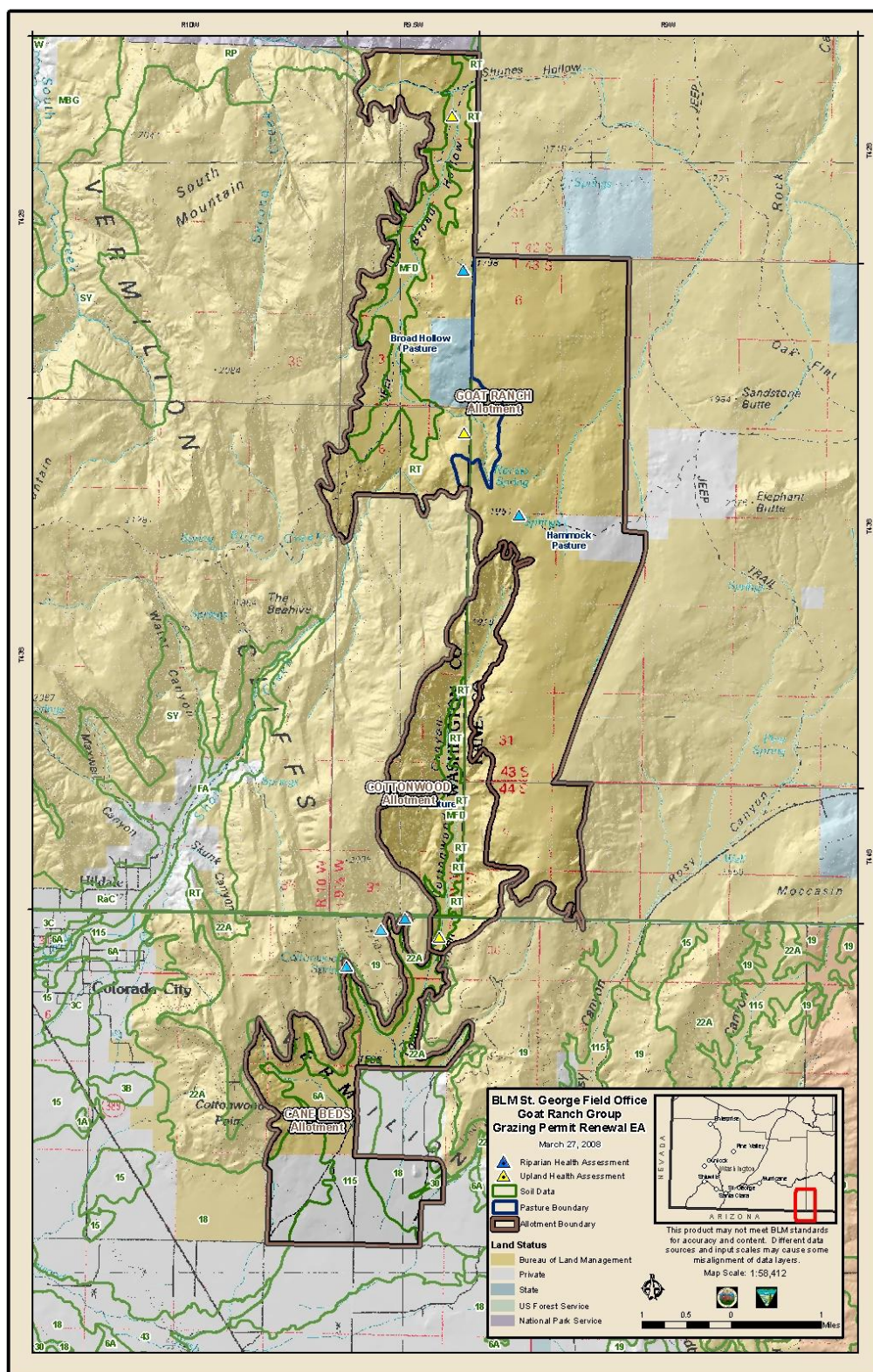


Figure 3-3. Map Showing Location of Riparian Areas and Rangeland Health Assessment Locations

category allotment with an AMP in place. The Cottonwood and Cane Beds Allotments are managed as “Custodial” allotments, which do not require intensive management, and AMPs have not been developed for either allotment.

Resource specialists from BLM regularly conduct inventories and assessments of natural resource conditions on public lands. The allotments evaluated in this EA have been monitored using trend studies and Rangeland Health Assessments. The trend studies collect two types of information. First, the percent cover of bare ground, litter, small rock, large rock, and vegetation cover are estimated along a permanent 100-foot transect. Second, the number of plants of each species is counted. These data can be compared over time to identify trends in plant growth, productivity, and composition.

The purpose of a Rangeland Health Assessment is to identify “the degree to which the integrity of the soil, vegetation, water, and air, as well as the ecological processes of the rangeland ecosystem are balanced and sustained.” Integrity is defined as the “maintenance of the functional attributes characteristic of a locale, including normal variability.”

For the assessments, BLM uses a qualitative assessment protocol presented in the technical reference, “Interpreting Indicators of Rangeland Health” (BLM 2000). In general, this protocol is designed to provide a qualitative evaluation of the integrity of ecological processes important to rangeland health; the water cycle, energy flow, and the nutrient cycle. The results help land managers identify areas that are potentially at risk of degradation. The information collected focuses on critical ecosystem properties and processes. This qualitative assessment provides a relatively fast survey technique to rate site protection indicators, including both plant and soil components.

Three interrelated attributes are evaluated to assess the status of the ecological processes, including soil/site stability, hydrologic function, and integrity of the biotic community. Soil/site stability is the capacity of the site to limit redistribution and loss of soil resources (including nutrients and organic matter) by wind and water. Hydrologic function is the capacity of the site to capture, store, and safely release water from precipitation and run-off, to resist a reduction in this capacity, and to recover this capacity following degradation.

The integrity of the biotic community is the capacity of the site to support characteristic functional and structural communities in the context of normal variability, to resist loss of this function and structure due to disturbance, and to recover following disturbance. The assessment protocol uses 17 indicators to gauge the condition of the three attributes described above. Since the attributes are interrelated, several of the indicators provide an assessment of more than one attribute. The indicators include soil rills, water flow patterns, pedestals and/or terracettes, bare ground, gullies, wind-scoured blowouts and/or deposition areas, litter movement, soil surface resistance to erosion, soil surface loss or degradation, plant community composition and distribution relative to infiltration and runoff, compaction layer, functional and structural plant groups, plant mortality and decadence, litter amount, annual plant production, invasive plants, and reproductive capability of perennials.

For an assessment, each indicator is rated based on the degree of departure from the ecological site description or characteristics of the ecological reference area. The ratings of departure from expected conditions are none to slight, slight to moderate, moderate, moderate to extreme, and extreme.

3.3.1.1

Goat Ranch

Allotment

The Goat Ranch Allotment is comprised of approximately 9,500 acres of BLM-administered public land, approximately 280 acres of private land, and 440 acres leased from the State of Utah for grazing use. The allotment straddles the boundary between Washington and Kane Counties, in Utah.

Approximately 10 % of the allotment contains areas of slick rock and sandstone outcrops that erode to well-drained sandy loam soils. The soils support a native sage-grass-forb association, characterized by Basin Big Sagebrush (*Artemisia tridentata*), big rabbitbrush, sand sage (*Artemisia filifolia*), Indian ricegrass (*Oryzopsis hymenoides*), Poa (*Poa* spp.), and sand dropseed (*Sporobolus cryptopantha*) at lower elevations. This community comprises approximately 20% of the allotment. A mountain shrub community covers approximately 60% of the allotment, at higher elevations. Species typical of the community include bitterbrush (*Purshia tridentata*), Gambel's oak (*Quercus gambelli*), Utah juniper (*Juniperus utahensis*), and pinyon pine (*Pinus monophylla*). In the 1970s, an 800 acre of Broad Hollow was treated with herbicides to remove the native shrubs and then re-seeded with sand dropseed. No further treatments have been undertaken at this site since its original treatment.

The allotment is managed as an "Improve" category allotment. In 1985, an AMP was put in place to improve watershed protection, livestock forage, and increase vegetative cover to benefit wildlife. The allotment was divided into two pastures: the Broad Hollow and Hammock Pastures (refer to **Figure 1-1** for locations of the pastures) and needed range improvements identified. The AMP established a grazing schedule of pasture rotation designed to improve the poor range conditions detected during a

1977-78 range survey completed by BLM and meet the stated objectives of the AMP. The allowable use level for the allotment is 50 percent utilization of key species.

Trend data have been collected periodically since 1968 in the Broad Hollow Pasture (**Figure 3-3**), which includes the 800 acre vegetative treatment site. The data show a static to downward trend in the 800 acre site, due to an increase in shrub components, especially big rabbitbrush, and a decrease in the grass/forb component. Over time, sand dropseed has been gradually replaced by other native grasses (e.g., Indian ricegrass) and sand sage. Drought conditions between 1999 and 2003 also contributed to the observed decline in the grass/forb component.

Studies conducted in the Hammock Pasture shows static vegetation trends, with little change in composition over the years (**Figure 3-4**). The 2007 assessment indicated a "none to slight" departure from the ecological reference area for most indicators in the Goat Ranch Allotment Area 1. All indicators for soil/site stability and hydrologic function were in the "none to slight" category for departure from the ecological reference area for both pastures.



Figure 3-4. View of Broad Hollow Pasture Trend Study, taken on 10/02/2005



Figure 3-5. View of Hammock Pasture Trend Study, taken on 10/02/2005

The functional/structural group indicator was in the “moderate to extreme” category along with the invasive plants category, due to percentages of big rabbitbrush and cheatgrass observed. Reproductive capability of perennial plants was classified as “moderate” due to potential for shrubs being good and grasses being limited (2007c). All of the indicator ratings for the Goat Ranch Area 2 were “none to slight” except for invasive plants which was classified as “slight to moderate”.

The rangeland assessments conducted in 2007 at key area 1 found that 61 percent of the ground cover was vascular plants, 24 percent was litter, 13 percent was bare ground and 2 percent was standing dead vegetation. At key area 2 there was 30 percent vascular plants, 28 percent litter, 40 percent bare ground and 2 percent standing dead vegetation.

Actual use of the Goat Ranch Allotment is presented in **Figure 3-6**. Actual use was less than authorized use (486 AUMs) between 1997 and 2007 with multiple years of non-use having been taken by the operator during the extended drought period that occurred in this region over the past decade.

Grazing Period	Used AUMs	Non used AUMs	% of use
6/01/07 to 10/15/07	Non-use		
6/01/06 to 10/15/06	Non-use		
6/01/05 to 10/15/05	Non-use		
6/01/04 to 10/15/04	Non-use		
6/01/03 to 10/15/03	Non-use		
6/01/02 to 10/15/02	Non-use		
6/01/01 to 10/15/01	208	278	43
6/01/00 to 10/15/00	Non-use		
6/01/99 to 10/15/99	300	186	62
6/01/98 to 10/15/98	350	136	72
6/01/97 to 10/15/97	389	97	80

Figure 3-6. Actual Use of Goat Ranch Allotment, 1997-2007

3.3.1.2 Cottonwood Allotment

The Cottonwood Allotment is comprised of approximately 2,255 acres of public land, with 17 head of cattle licensed for grazing use from winter to spring (refer to **Figure 2-1**). The allotment is managed as a Custodial allotment and does not have a formal grazing system.

The 2006 Rangeland Health Assessment concluded that the ecosystem within the allotment was functioning properly. Rangeland health standards were met for upland soils and native threatened and endangered species. The 2006 assessment indicated a “none to slight” departure from the ecological reference area for most indicators. All indicators for soil/site stability and hydrologic function were in the “none to slight” category for departure from ecological reference area. Most of the indicators for biotic integrity were also in the “none to slight” category. For the functional/ structural groups indicators were in the “slight to moderate” category, due to less grass species present than expected. Some loss of plants was observed due to drought (BLM 2006a).

Data collected for the key areas within the Cottonwood Allotment along the range trend

transect in 2006 found 25% bare ground, 25% litter, and 50% vegetation cover, dominated by Basin Big sagebrush (70 %) and big rabbitbrush (29%).

There is no frequency data available for the Cottonwood Allotment. Actual use of the Cottonwood Allotment is presented in **Figure 3-7**. Actual use was less than authorized (135 AUMs) between 1997 and 2007, with a period of non-use from 2002 to 2004.

Season of use	Used AUMs	Non used AUMs	% of use
10/16/06 to 5/31/07	112	23	83
10/16/05 to 5/31/06	82	36	73
10/16/05 to 5/31/06	16		
10/16/04 to 5/31/05	90	45	67
2003 to 2004	Non-use		
2002 to 2003	Non-use		
10/16/01 to 5/31/02	75	44	63*
10/16/00 to 5/31/01	119	8	88
10/16/99 to 5/31/00	119	0	100*
10/16/98 to 5/31/99	119	0	100*
10/16/97 to 5/31/98	119	0	100*
* During this year's percent use was calculated on the use of 93% of the public land within the allotment, representing 119 AUMs versus the 135 permitted AUMs			

Figure -7. Actual Use Data for Cottonwood Allotment, 1997-2007

3.3.1.3 Cane Beds Allotment

The Cane Beds Allotment is comprised of 1565 acres of BLM-managed public land. This Custodial allotment is licensed for grazing use by 7 head of cattle on a year round basis between March 1 and February 28.

The 2006 Rangeland Health Assessment concluded that the ecosystem within the allotment was functioning properly. Rangeland health standards were met for upland soils and native threatened and endangered species. Guidelines for grazing management are being conformed to within

the allotment (BLM 2006b).

The 2006 assessment indicated a “none to slight” departure from the ecological reference area for most indicators (**Figure 3-8**). Most of the indicators for soil/site stability and hydrologic function were in the “none to slight” category for departure from ecological reference area. Most of the indicators for biotic integrity were also in the “none to slight” category. For functional/structural groups and invasive plant indicators were in the “slight to moderate” category (BLM 2006b).

In 2006, live plant cover in the range trend plot on the Cane Beds Allotment was approximately 16 percent. Data collected along the range trend transect in 2006 identified 28 % bare soil, 46 % litter, and 16 % vegetation cover. The vegetation cover was dominated by broom snakeweed (34 %), curly grass (22 %) and Basin Big Sagebrush (22 %)



Figure 3-8 View of Cane Beds Allotment Study Area, taken on 11/08/2005

There is no frequency data available for the Cane Beds Allotment (BLM 2006b). Actual use of the Cane Beds Allotment is presented in **Figure 3-9**. In recent years, actual use has been less than authorized use.

Season of use	Used AUMs	Non used AUMs	% of use
3/1/06 to 2/28/07	60	24	71
3/1/05 to 2/28/06	60	24	71
3/1/04 to 2/28/05	48	36	57
3/1/03 to 2/28/04	48	36	57
3/1/02 to 8/16/02	39	19	77
3/1/02 to 2/28/03	26		
3/1/01 to 2/28/02	84	0	100
3/1/00 to 2/28/01	78	6	93
3/1/99 to 2/28/00	78	6	93
3/1/98 to 2/28/99	78	6	93
3/1/97 to 2/28/98	78	6	93
3/1/96 to 2/28/97	78	6	93

Figure -9. Actual Use Data for Cane Beds Allotment from 1996-2007

3.3.2 BLM/State Sensitive Species and Other Wildlife

The BLM/State Sensitive species shown below in **Figure 3-10** have the potential to be found in these three allotments. This figure also estimates the probability of their occurrence, based on habitat needs and available data. These species are being monitored closely by the respective state wildlife agencies and BLM, due to declining population numbers. Generally, the noted declines are due to habitat loss and/or fragmentation.

Other wildlife species that are present in three allotments include: badger, antelope ground squirrel, kangaroo rat, deer mouse, desert wood rat, mourning dove, common raven, wren, house finch, side-blotched lizard, and western whiptail. Infrequently, larger mammals, such as coyotes and gray fox may hunt or travel through the area.

Although mule deer are neither a federal nor state-listed species, the Utah Division of Wildlife Resources closely monitors deer populations and habitat in Washington County. Major roadway construction and county-wide population growth have changed deer migration patterns, eliminated

access to many natural water sources, and

Species	Resident	Likelihood of Occurrence
Burrowing owl (<i>Speotyto cunicularia</i>)	PR	uncommon
Ferruginous hawk (<i>Buteo regalis</i>)	PR	fairly common
Allen's big-eared bat (<i>Idionycteris phyllotis</i>)	PR	extremely rare
Big free-tailed bat (<i>Nyctinomops macrotis</i>)	SR	rare
Fringed myotis (<i>Myotis thysanodes</i>)	PR	uncommon
Kit fox (<i>Vulpes velox</i>)	PR	uncommon
Long-eared myotis (<i>Myotis evotis</i>)	PR or SR	fairly common
Long-legged myotis (<i>Myotis volans</i>)	PR	fairly common
Northern sagebrush lizard (<i>Sceloporus graciosus</i>)	PR	fairly common
Spotted bat (<i>Euderma maculatum</i>)	PR	rare
Townsend's big-eared bat (<i>Plecotus townsendii</i>)	PR	fairly common
Western red bat (<i>Lasiurus blossevillei</i>)	PR	extremely rare
Western small-footed myotis (<i>Myotis ciliolabrum</i>)	PR	uncommon

PR – Permanent resident, SR-Summer resident

Figure -10. BLM/State Sensitive Species That May Occur within the Allotments

affected the quality of habitat. UDWR has identified two large mule deer herd units in Washington County, of which the Zion Unit encompasses all deer habitat east of I-15 to the Kane County line. The Goat Ranch and Cottonwood allotments are within this unit, which has a deer population of approximately 7,500 animals. The allotments receive deer use primarily from October through April, particularly in areas on private land that are dry farmed. Moderate deer use was observed on the allotments during the 2006 and 2007 Rangeland Health Assessments. Major browse species in these areas, such as

bitterbrush, were receiving heavier use.

3.3.3 Soils

The topography of the allotments includes mesa tops (plateaus), alluvial fans, and steep-side slopes. The soil associations within the allotments are classified and described in the Washington County Area, Soil Survey (November 27, 2006; Web Soil Survey 2008) and Mohave County Area, Arizona, Northeastern Part, and Part of Coconino County, Soil Survey (Version 6, March 2, 2007; Web Soil Survey 2008). Figure 3-10 displays the locations of the different soil types within the three allotments. There are five soil types found in the allotments. These soil types include the Mido loamy fine sand, 1 to 4 percent slopes, Torriorthents-Rock outcrop complex 30 to 70 percent slopes, Royosa-Tonalea complex 1 to 15 percent slopes, Barx fine sandy loam 1 to 5 percent slopes, and Rock outcrops, Mespun fine sand 0 to 10 percent slopes.

The Mido loamy fine sand is an excessively drained soil that is derived from sandstone. Erosion of these soils is moderate.

The Torriorthents-Rock outcrop complex is a well drained soil that occurs on hills and escarpments within the allotments. The parent material for this soil complex is colluvium and/or alluvium derived from limestone, sandstone, and shale.

The Royosa-Tonalea complex is an excessively drained soil complex that occurs on plateaus. The parent material for this soil complex is eolian sands derived from sandstone. This soil has a low water capacity.

The Barx fine sandy loam occurs on fan terraces. The soils are well drained and are derived from sandstone.

The Mespun fine sand, 0 to 10 percent slopes, is a well drained soil that occurs on

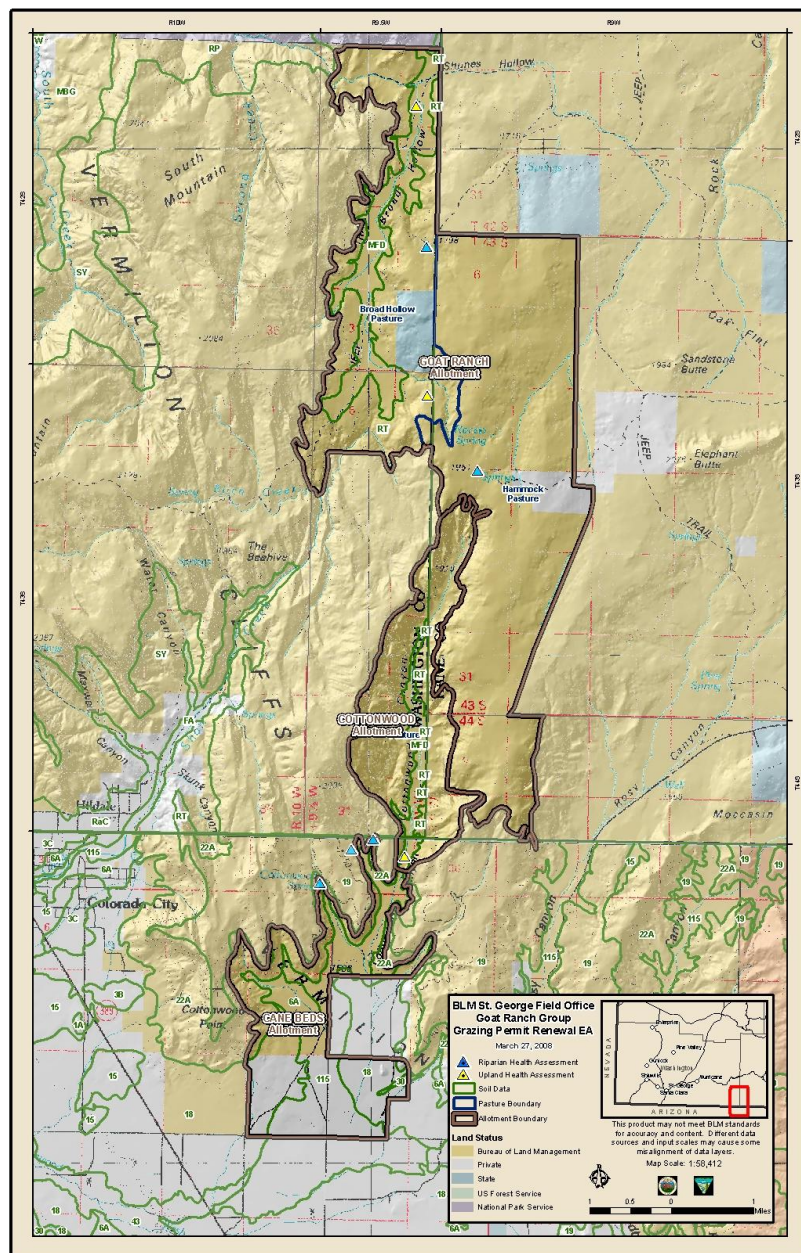
plateaus within the allotments. The soils are hummocky eolian sands derived from sandstone. Crypto-biotic soil crusts are often present on this and the other soil types in the allotments.

Apparent trend indicators show that soil conditions are stable within these allotments according to the most recent assessments. Ground cover dispersion is uniform, there was little to no detectable soil movement, no exposed plant roots, and stones and rock fragments, where present, were normal and in place with no movement of rock fragments.

3.3.4 Vegetation

The native vegetation communities supported by the soil types in these allotments range from semi-desert shrub species, grasses, and forbs at the lower elevations of the allotments, to upland shrub species and pinyon-juniper woodlands on the benches and slopes of the upper elevations. Some Ponderosa pine is also present on north facing slopes and drainages, at the higher elevations.

The trend for vegetation resources on the Goat Ranch Allotment is stable in the Hammock Pasture and static to downward i trend in the Broad Hollow Pasture according to the 2007 Rangeland Health Assessments. Of the 17 indicators evaluated in the health assessment process some departure was noted on two. Desirable frequency groupings and age classes of desirables, intermediates, and least desirables were present in most cases. It was noted in key area 1, within the 800 acre vegetative treatment area, that the density of shrub species, especially big rabbitbrush, was increasing and desirable grasses/forbs decreasing. The increase in shrub cover is also resulting in a moderate to extreme departure from ecological site descriptions for the functional/structural groups within the assessment area.



Map Symbol	Soil Type
115	Mido
22a	Torriorthents-Rock
18	Royosa-Tonalea
6a	Barx
MFD	Mespon

Figure 3-11. Soil Types in the Allotments

Forage plants are not being pulled up or trampled out by grazing. Vigor of key species was low in some areas, but that was attributed to the extended drought period (1999-2003, again in 2006) in this region. Browse species were showing no hedging, with slight use by livestock and wildlife observed in some areas.

Functional and structural groups in the Cottonwood Allotment showed a slight to moderate departure from expected trend. Fewer grass species were observed within the key area; this was attributed to the extended periods of lower than average precipitation in southwestern Utah during the past decade.

Within the Cane Beds Allotment functional/structural groups are experiencing a slight to moderate departure from expected composition. This departure was also linked to the impacts on native grass species from multiple successive years of drought conditions over the last decade.

3.3.5 Socio-economic Values

Public land grazing in Washington, Kane, and Mojave Counties supports a traditional and historical way of life. Although historically livestock grazing in the region was at a higher intensity than at the present time, the livestock business has, and continues to be a traditional way of life for many permit holders. Income derived from public land grazing permits continues to comprise a small to substantial portion of their individual livelihoods.

At the regional level, revenues and employment opportunities in agricultural activities have declined in importance. Growth in recreation and tourism in the region continues to be high and is increasingly contributing to the local economy of the St. George area (BLM 1998). These trends are projected to continue through 2025. In 2000, agriculture

provided 1.04 percent of the employment of Washington County as compared to 4.86 percent in 1980 (GOPB 2001). The number of cattle/calf farms in Washington County decreased from 287 in 1997 to 230 in 2002 (NASS 2002).

The USDA 2002 Census of Agriculture identified 481 farms and ranches within Washington County. The market value of all agriculture products sold from county farms and ranches totaled \$7,256,000. The sale of cattle and calves accounted for \$3,968,000, or 55 percent of the total market value. Beef cattle and calves constitute 88 percent of the cattle inventory, for an approximate annual sales value of \$3,492,000. The total beef cattle inventory for 2002 was 7,484 animals (USDA 2002).

In Kane County, government employment and service jobs are the largest sectors of the local economy. Tourism and recreation-related jobs account for 37 percent of total employment. As in Washington County, revenues and employment in the agricultural sector no longer contribute significantly to the local economy. During the period between 2000 and 2004, livestock grazing on BLM-managed public lands here contributed 2.6 % of the most recent 5 year average of cash receipts for livestock and livestock products (\$11,502,000). This small percentage may not accurately reflect the importance of public land use for grazing. Without availability of public lands to support grazing at certain times of the year, most ranching operations and their associated lifestyles would largely disappear from the county (BLM 2007:3-104).

Mojave County, Arizona is sparsely populated with most residents living in the small communities of Colorado City, Desert Springs, Beaver Dam, Littlefield, Scenic, and Arvada. The local economic base for these communities is primarily derived from tourism-related businesses, such as

accommodations and food service. Many residents are employed in St. George, Utah or Mesquite, Nevada.

The total economic contribution from ranching operations on public lands is no longer statistically significant within the region. Fees paid to the federal government for livestock grazing permits generate revenue for the U.S. Treasury, of which 12.5 per cent is returned to the local Grazing Advisory Board to fund range improvements and maintenance projects. This provides a direct economic benefit to the permit holders who pay the fees. The support of livestock operations contributes to the economic support of local communities and to the livestock industry in the West in general.

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4 ENVIRONMENTAL IMPACTS

The potential consequences or effects of Alternative A, the Proposed Action and Alternative B, the No Action Alternative are analyzed in this chapter. All known mitigating measures have been included in the Proposed Action and No Action Alternative. It is assumed that the alternatives would be implemented as described, using accepted grazing management guidelines, and that the permit holders would meet the terms and conditions specified in the description of alternatives.

The condition and trend of the allotments over the next 10 years (the term of the grazing permit) is expected to be static or slightly upward under the Proposed Action and No Action Alternatives. The assessments have shown that the ecosystems encompassing the allotments are functioning properly indicating that current stocking levels are sustainable.

4.1 Direct/Indirect Effects

Direct effects are those caused by the action and occur at the same time and place.

Indirect effects are those that are reasonably foreseeable consequences of the action but are later in time or further removed in distance from direct effects. Both of these types of effects are discussed in this section.

4.1.1 Effects of Alternative A: Proposed Action

This section describes environmental effects from Alternative A: Proposed Action.

Threatened, Endangered, or Candidate Species and Migratory Birds

An analysis of the Proposed Action alternative by the BLM has determined that the proposed renewal of the ten-year term permits for the three allotments “may affect but would not be likely to adversely affect” the California condor or Mexican spotted

owl. BLM will conduct Section 7 consultation with the U.S. Fish and Wildlife Service to seek concurrence with the agency’s findings. Potential impacts related to livestock grazing could include reduction of vegetative cover that would support prey for either species or serve as roosting or nesting habitat. The Rangeland Health Assessments completed within these allotments that the upland eco-sites were meeting Utah Standards for vegetative conditions, soil productivity and stability. Adequate prey would also be available in the long term, as current grazing management standards are not negatively impacting vegetative communities that support diverse wildlife species. Foraging, hunting, and dispersal habitat for California condor and Mexican spotted owl designated critical habitat would continue to be maintained in proper functioning condition within the Goat Ranch and Cottonwood allotments. Potential Mexican spotted owl habitat in the Cane Beds Allotment consists of steep-sided canyons that are not accessible to livestock, so there would be no impact on this habitat under the Proposed Action or No Action alternative.

Southwestern willow flycatcher or Western yellow-billed cuckoo would also not be adversely impacted under the Proposed Action, as the two riparian areas at Cottonwood and Cappies Rock Springs were functioning properly. Both species could continue to find cover and prey species at these springs. No suitable nesting habitat is present at either spring, as the critical variables needed to provide suitable nesting habitat were not present.

Under the Proposed Action, the allotments should continue to provide good habitat for migratory birds. Raptors like golden and bald eagles, American kestrel, and red-tailed hawks would continue to find an adequate and diverse prey base, since native vegetation communities and riparian areas

would continue to meet Utah Standards for Rangeland Health. Neo-tropical migratory birds, such as rough-winged swallow, mountain bluebirds, and white-throated swift could continue to find cover and breeding/nesting habitat within the 13,320 acres of public land included within the three allotments.

From the Rangeland Health Assessment completed for the allotments in 2006 and 2007, all upland and riparian assessment sites were determined to be functioning properly. Under the Proposed Action, grazing on the three allotments would continue to be managed under current permit terms and conditions, with no changes in livestock numbers or season of use. For the Goat Ranch Allotment, 122 cattle would be licensed to graze within 9500 acres of public land, during the spring and summer season of use under the pasture rotation system authorized in the AMP. Since 1997, actual use of this allotment has been less than full authorized use, with multiple years of non-use being taken during the extended drought period of the past decade. Similarly, the Cottonwood and Cane Beds Allotments are grazed by few cattle within relatively large land bases. No range improvements would be constructed that would alter livestock grazing or trailing patterns. In light of the small number of livestock that are grazed in these allotments, the upland vegetation would be properly utilized by livestock and continue to be maintained in good condition. The ecosystems of the allotments would continue to provide good habitat for threatened, endangered, or candidate species and seasonal migratory birds.

Vegetation in the riparian zones associated with Cappies Rock and Cottonwood Springs would continue to be properly utilized by livestock and maintained in good condition under the Proposed Action, as no changes in livestock grazing management would occur. The long-term maintenance of fences,

waters, and other livestock operations should not cause direct or indirect adverse effects on threatened, endangered, or candidate species or their habitats under the Proposed Action alternative.

No adverse impacts on migratory bird would result. Breeding, nesting, foraging, and hunting habitats would be maintained in good condition for raptors, and passerine song birds.

Wetlands/Riparian Zones

Riparian assessments were completed at the five springs within these allotments in 2006 and 2007. Three of the springs (Goat, Stateline, and Maiden Hair) do not support riparian vegetation, either because water has been piped away from the source or because the spring is now dry. Cappies Rock and Cottonwood Spring continue to sustain riparian vegetation and to function properly. Grazing use at current levels is not adversely impacting riparian values at either spring. As no changes in livestock numbers, seasons of use, or management systems would be made under the Proposed Action, the two riparian areas would continue to function properly over the ten year term of the grazing permits.

Noxious Weeds and Invasive Species

Scotch thistle, a noxious weed in Utah, is present in one area of the Broad Hollow Pasture of the Goat Ranch Allotment. As livestock do not graze on this thistle and do not spread its seeds through manure, licensed livestock grazing on the Goat Ranch Allotment should not contribute to the spread of Scotch thistle on public lands.

Cheatgrass was observed in the allotments and is prevalent elsewhere in the region, in areas that have never been grazed. Actual use in the three allotments during the period from 1997-2007 has been well below the

authorized use levels, with non-use taken in the Goat Ranch Allotment for the past five years. Livestock grazing is not contributing to the spread of cheatgrass in this allotment and would be unlikely to do so in the other allotments at current use levels.

Livestock Grazing

This alternative would license livestock grazing in the allotments at the same licensed number of livestock and season of use as in the past. Issuance of the permits at this time would allow the permit holders to continue their grazing operations with some degree of predictability during the ten-year period of the term permits, assuming that rangeland resource trends remain static to upward.

BLM/State Sensitive Species and Other Wildlife

Under the Proposed Action, soils and vegetation within 13,320 acres of public land in the three allotments would continue to meet Utah Standards for Rangeland Health. The two riparian areas at Cappies Rock and Cottonwood Springs would continue to function properly as no changes in livestock uses are proposed. Both riparian areas would continue to provide potential hunting or roosting opportunities for bald eagles, ferruginous hawks, and other State-Sensitive species. Upland native vegetative communities within the allotments would also continue to provide cover, nesting, hunting and forage opportunities for BLM/State Sensitive Species and other wildlife, as no changes in livestock grazing are proposed.

No impacts on the quality of winter habitat for mule deer in the Zion Management Unit are expected, as Utah Standards for Rangeland Health would continue to be met in the allotments. No new range fencing or other improvements are proposed that could affect deer migration patterns or inhibit access to water sources. Similarly, other

terrestrial and avian wildlife would not be affected by continued livestock grazing at the stocking levels and seasons of use identified under the Proposed Action.

Routine maintenance of fences, waters and other livestock operations should not negatively impact wildlife or their habitats over the ten-year term of the permits. Such activities would be short term in duration and localized and would not result in new surface disturbances or loss of habitat. No new range improvements are proposed, so no BLM/State Sensitive species habitat would be lost or modified.

Soils and Vegetation

Data collected from the Rangeland Health Assessments and other monitoring activities indicate that livestock grazing under current management is not negatively impacting soils or crypto-biotic soil crusts within these allotments. Apparent trend indicators show that soil conditions are stable, ground cover dispersion is uniform, and there has been little to no detectable soil movement. No exposed plant roots were visible and stones and rock fragments, where present, were normal and in place with no movement of rock fragments. Biotic integrity indicators were mostly in the “none to slight” departure category from ecological reference areas.

Similarly, data collected from the 2006 and 2007 Rangeland Health Assessments indicate that livestock grazing is not negatively impacting the health of the vegetative communities present. Forage plants were not being pulled up or trampled out by grazing and vigor of key species was good in most areas.

The Proposed Action would renew the ten-year grazing permits for the three allotments under the same terms and conditions. Overall, these levels of use should maintain soil stability and productivity and healthy

vegetative communities in the short and long term.

Socioeconomic Values

These allotments are not the primary sources of income for the permit holders, who have other sources of income. However, these federal grazing permit holders derive at least a small portion of their annual income from the livestock grazing. Livestock also represents a traditional way of life for most permit holders, connecting them with past eras, when agricultural and ranching activities were major contributors to the regional economy. The Proposed Action would renew ten year term grazing permits for the livestock operators on the Goat Ranch, Cottonwood, and Cane Beds Allotments, thereby continuing an historical and traditional way of life for this area. Issuance of the permits would allow the permit holders to continue their grazing operations with some degree of predictability during the ten-year period of the term permit.

Mitigation Measures

No measures other than those currently incorporated into grazing management practices have been identified. Those mitigation measures have been sufficient to protect resources within the allotments.

Monitoring and/or Compliance

Trend studies would continue to be completed by members of the BLM range staff. The information would be used to determine and evaluate any change in range trend or condition on the allotments. As in the past, public participation would be welcomed for all resource monitoring efforts.

4.1.2 Effects of Alternative B: No Action

This section describes environmental effects from Alternative B No Action. The No Action alternative would not renew the term

grazing permits at this time and licensed grazing uses would continue under the current terms and conditions of the existing permits. Effects from grazing on all public land resources, except Socio-Economic Values, would be of the same scope, intensity, and duration as those described above for the Proposed Action.

Socioeconomic Values

Under the No Action Alternative, the ten year term grazing permits would not be renewed at this time. Upon their expiration in 2014, the permits would likely be renewed, either through a NEPA process or other authority, such as the legislative “rider”. If, for reasons that are unknown at this time, the term grazing permits could not be renewed upon expiration in 2014, the individual permit holders could be negatively impacted in the short term by loss of income, if they are not able to find other grazing options. Such a loss of income would be important to the individuals, but would likely not measurably or adversely impact the local economies of Washington County, Kane County, or Mojave County.

Mitigation Measures

No measures other than those currently incorporated into grazing management practices have been identified. Those mitigation measures have been sufficient to protect resources within the allotments.

Monitoring and/or Compliance

Grazing monitoring schedules would remain the same as at present time and would be the same as those described above under the Proposed Action alternative.

4.2 Cumulative Effects

“Cumulative effects” are those effects resulting from the incremental effect of an action when added to other past, present, or reasonably foreseeable actions, regardless of what agency or person undertakes such other

actions. All resource values addressed in Chapter 3 have been evaluated for cumulative effects. If, through the implementation of mitigation measures or project design features, no net effect to a particular resource results from an action, then no cumulative effects result.

A complete analysis of cumulative effects from actions proposed or occurring on public lands is provided in the BLM-St. George Field Office -Dixie Resource Area Management Draft and Final EIS (BLM 1995,1998), the Kanab Draft RMP/Draft EIS (BLM 2007); and the Arizona Strip RMP/Draft and Final EIS (2005,2007).

Past and present actions and reasonably foreseeable future actions with the potential to contribute to cumulative effects are discussed below followed by an analysis of cumulative effects.

4.2 Past and Present Actions

The rapid urbanization of southwestern Utah during the past two decades has displaced many recreational users who enjoy dispersed activities to more remote areas of the region, including Kane County and Mojave County. Use of both motorized off-highway vehicles (OHV) and mountain bikes has increased on public lands in and near these allotments. All types of motorized and non-motorized recreation uses would be expected to increase as regional populations grow. Within the Goat Ranch Allotment, Shunes Creek area is very popular recreation area, as it provides access to the scenic views at the "Mail Drop." The Broad Hollow area, near the center of the Goat Ranch Allotment, also receives intensive motorized Off-Highway Vehicle use on a "cherry-stemmed route" into the Canaan Mountain WSA.

Major roadway construction and county-wide population growth have affected mule deer populations in Washington County, altering traditional deer migration patterns, eliminating access to many natural water

sources, and reducing the quantity and quality of available deer habitat. Wildland fires that have burned in the general area have also reduced the available wildlife habitat.

Cheatgrass and other invasive species are present in all of the allotments and elsewhere in the region, on grazed and ungrazed public and private lands. Noxious weeds, including Scotch thistle, are present on private lands and other public lands, as well as in the Broad Hollow Pasture of the Goat Ranch Allotment. BLM partners with local county governments to support eradication of noxious weeds and invasive species. Spraying of approved herbicides is conducted by the respective counties or contracted to private entities to continue eradication/control efforts on an annual basis.

4.2.1 Reasonably Foreseeable Action Scenario

The following reasonably foreseeable action scenario identifies the reasonably foreseeable future actions that have the potential to cumulatively affect the same resources as the Proposed Action and No Action alternatives.

Most of southwestern Utah has experienced population growth over the last 20 years (e.g., 84 percent growth between 1990 and 2000 [OPB 2002]) and this trend is expected to continue for the foreseeable future. Washington County is now the second fastest growing county in the nation, with regard to population growth. Private lands in small rural communities, including Hildale, UT and Colorado City, AZ, are being subdivided and sold for residential housing developments or commercial ventures. Some of the proposed developments may require rights-of-way from BLM for new utility lines, water storage facilities, access roads, or other infrastructure. The respective BLM offices

also will likely issue motorized and non-motorized Special Recreation Permits for activities in the general area of the three allotments. These permits could authorize commercial and/or competitive recreational activities or special events to occur on public lands in the allotments.

Wildland fires have not impacted this area of southeastern Washington County. Elsewhere in the county and the western Arizona Strip, large acreages of public rangeland have been damaged by large, high intensity wildfires over the past decade. These areas required emergency stabilization actions and closure to livestock grazing during the required periods grazing after fire rehabilitation efforts.

Legislation has been introduced before the U.S. Congress that addresses public lands in Washington County. If the Washington County Growth and Conservation Act passed, among other initiatives, this legislation would designate wilderness areas on public lands managed by BLM and on lands managed by the National Park Service in Zion National Park. Canaan Mountain WSA would be designated as wilderness. Public land acreage within Goat Ranch and Cottonwood Allotments would be located within this wilderness area. Wilderness status would not preclude the continuation of livestock grazing but could impose restrictions on the use of motorized or mechanized vehicles and on range developments that could impair wilderness values. Such restrictions would be identified in the wilderness management plan prepared by BLM following designation by Congress.

4.2.2 Analysis

There are no specific federal actions proposed directly within or adjacent to the allotments at this time that would affect the same resources as those of the Proposed Action or No Action alternatives.

Past and present actions with the potential to contribute to cumulative effects are increasing recreation use (particularly OHVs), urbanization, rehabilitation efforts, invasive species control, and livestock grazing.

Population growth in the formerly small rural communities in Washington and Kane Counties has the potential to contribute to cumulative effects. Some of the private lands in the area could be developed as rural residential housing subdivisions or as commercial facilities. Effects from these actions would be from soil disturbance related to construction in the short term and loss of open space in the long term.

Increases in local and visitor use of public lands are also expected. Recreation use, particularly by OHVs, can create trails and damage vegetation. Off-trail OHV use, though limited in the area, can also affect soils through soil compaction and increased erosion. Grazing can impact vegetation and soils near water sources due to the tendency of livestock to congregate around water. OHV use that deviates from designated trails on a routine basis has the tendency to remove vegetation and cause rutting and localized compaction of the soils. These impacts can be locally significant but overall they affect a small portion of the allotments. Recreation use in this area is not as high as other areas of Washington and Kane Counties and is not expected to contribute to cumulative effects to the resources.

Control and eradication of noxious weeds and invasive species is also ongoing as a partnership between BLM and local county governments and should provide beneficial impacts in the long-term by reducing the spread of these species.

Congressional designation of wilderness could occur for the Canaan Mountain WSA and this designation could affect livestock grazing management within the Goat Ranch

Allotment, but would not eliminate grazing as the Wilderness Act recognizes it as valid use of public lands.

The potential for adverse cumulative impacts is low, when considered in light of other past, present, or reasonably foreseeable actions within the area.

Regardless of the approval and implementation of the Proposed Action, impacts from other actions would still occur on private and public lands in the area. Ongoing construction and development in the surrounding area would facilitate growth of the area and could lead to additional resource pressure. Open space would likely continue to be reduced as a result of these non-federal actions. Protection afforded to BLM-administered lands designated for grazing use would help to offset these overall impacts for wildlife, vegetative communities, soils, and water quality.

4.3.3.1 Alternative A: Proposed Action

The Proposed Action would continue grazing under current terms and conditions in the allotments. This action would be added to past activities that have occurred in the general area. Environmental effects, when added to those resulting from past actions in the same area would not result in cumulatively adverse environmental impacts. Livestock grazing is occurring at levels that have been adjusted in the past to lessen the potential impacts on natural resources and eliminate conflicts with other resources. Monitoring of multiple use practices in the project area has been employed in the past and will continue to help maintain the balance between livestock grazing and other uses.

Research has shown that the ecological impacts of grazing depend on management, and management can be tailored to meet the needs of wildlife, livestock, and other public land users. Site-specific information from the assessments shows that current grazing

management practices are protecting resources within the allotment. The current numbers of livestock grazed and the seasons of use are not resulting in damage to resources; cumulative effects to resources would not result from continued grazing under the Proposed Action.

4.3.3.2 Alternative B: No Action

The No Action alternative would not renew the ten year term grazing permits at this time. Authorize livestock graze use for the three allotments would continue under the current permits, which expire in 2014. Effects from grazing under the No Action alternative would be the same as from the Proposed Action over the life of the permit.

4.3 Irreversible and/or Irretrievable Commitments of Resources

Irreversible commitments are those that cannot be reversed, except in the extreme long-term, and irretrievable commitments are those that are lost for a period of time. There would not be any irreversible or irretrievable commitments of resources from implementation of the Proposed Action or No Action alternative. Energy requirements and conservation measurements would not be affected.

5 CONSULTATION AND COORDINATION

Appendix A contains a checklist of all resources considered, compiled by the BLM St. George, Kanab, and Arizona Strip Field Offices ID Teams and provides the rationale for issues that were considered but not analyzed further. The issue identification section of Chapter 1 identifies the issues analyzed in detail in Chapter 4; these issues were identified through input from the ID Team and by the Standards and Guides Assessments completed for the allotments. Information necessary for the analysis was provided by the ID Team members and the EA was prepared and reviewed by the BLM staff shown in **Figure 5-1**.

Public notification of the NEPA process included posting information in the St. George Field Office's Public Information Room and posting on the Utah ENBB on February 13, 2008. The postings described the nature of the federal action and the issues identified for screening in the EA, invited public scoping input, and provide a point of contact for additional information. No public comments were received during the scoping period for the EA.

A Notification of Availability for the preliminary EA will be mailed to federal, state, and local governmental entities, culturally affiliated American Indian Tribes, the livestock operators, and other interested parties. A 30 day public review and comment period will be offered on the EA. This information will also be posted in the Public Information Room and on the Utah ENBB.

Consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act will be conducted concurrently with the public review period for the EA. The preliminary EA will be revised, if needed, based on public comments or consultations with the Service.

Figure -1. BLM Preparers/Reviewers of Environmental Assessment; Other Preparers

Name	Title	Responsible for ID Team Screening, Preparation or Review of the Following Resource Sections
BLM Personnel		
Kim Leany (SGFO) Robert Sandberg (ASFO) Randy Beckstrand (KFO)	Range Conservationist	Invasive Species, Range/Livestock Grazing, Woodland/Forestry, Vegetation, Fuel/Fire Management, Wild Horses and Burros
Dave Corry (SGFO)	Natural Resource Specialist	Air Quality, Farmlands, Water Quality, Wetlands/Riparian Zones, Soils, Floodplains, Soils,
Robert Douglas (SGFO) Lisa Church (KFO) Tom Denniston (ASFO)	Biologist	Threatened, Endangered, or Candidate Animal Species, , Fish and Wildlife Including Special Status Species, Migratory Birds
Dawna Ferris-Rowley (SGFO)	Assistant Field Office Manager	Cultural Resources, Native American Religious Concerns, Environmental Justice, Socio-economic Values, NEPA Adequacy, Technical Review, and Quality Control for all sections of the EA
Russell Schreiner (SGFO)	Geologist	Wastes, Geology, Mineral Resources/Energy Production, Paleontology
Dave Kiel (SGFO)	Outdoor Recreation Planner	Wild and Scenic Rivers, Wilderness, Recreation, Visual Resources, Wilderness Characteristics
Kathy Abbot (SGFO)	Realty Specialist	Land Access
Robert Douglas (SGFO) Lisa Church (KFO) Lee Hughes (ASFO)	Biologist Biologist Botanist	Threatened, Endangered, or Candidate Plant Species Special Status Plant Species
Lorraine Christensen (ASFO)	Field Office Manager	NEPA Adequacy, Technical Review and Quality Control for all sections of the EA
Other Preparers		
North Wind, Inc.	Contractors	Administrative review draft of EA

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6.2 List of Acronyms and Abbreviations Used in this EA

AMP	Allotment Management Plan
AUM	Animal Unit Month
BLM	Bureau of Land Management
EA	Environmental Assessment
EIS	Environmental Impact Statement
ENBB	Environmental Notification Bulletin Board
FLPMA	Federal Land Policy and Management Act
FONSI	Finding of No Significant Impact
FWS	Fish and Wildlife Service
ID Team	Interdisciplinary Team
NEPA	National Environmental Policy Act
OHV	Off-Highway Vehicle
RMP	Resource Management Plan
SSS	Special Status Species
WSA	Wilderness Study Area

Appendix A

INTERDISCIPLINARY TEAM ANALYSIS RECORD CHECKLIST

Project Title: Goat Ranch Group Grazing Permit Renewal EA

Project Description: Renewal of Ten-Year Term Grazing Permits for the Goat Ranch, Cottonwood, and Cane Beds Grazing Allotments, located in Washington and Kane Counties, Utah, and Mohave County, Arizona. The St. George Field Office-BLM currently has livestock management responsibilities for the three allotments, but Kanab Field Office will assume administration of the Goat Ranch Allotment after the permit renewal process is completed.

Rangeland Health Assessments were completed by the St. George Field Office and Kanab Field Office ID Team in 2006 and 2007 and resulted in Summary Determinations that the three allotments are currently meeting Utah Rangeland Health Standards and Guidelines (1997). There are no proposed range improvements for any of the allotments. No changes in class of livestock, livestock numbers, or season of use have been requested by the livestock operators or recommended by BLM resource professionals.

NEPA Log Number: UT-100-08-EA-04

File/Serial Number: None

Project Leader: Kim Leany

DETERMINATION OF STAFF: (Choose one of the following abbreviated options for the left column)

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for significant impact analyzed in detail in the EA; or identified in a DNA as requiring further analysis

Determination	Resource	Rationale for Determination*	Signature	Date
CRITICAL ELEMENTS				
NI	Air Quality	The Proposed Action would not measurably impact air quality standards. Livestock trailing could produce small amounts of fugitive dust in the short term, but this would cause negligible and localized impacts on air quality.	D. Corry	12/17/07
NI	ACECs	The Canaan Mountain ACEC overlaps with the Goat Ranch Allotment (approximately 9.5% of total allotment acreage) and the Cottonwood Allotment. The relevance and importance criteria for this ACEC are its scenic qualities and heritage resource values. As no range improvements are proposed in the Goat Ranch Allotment, there would be no impacts on the visual qualities of the ACEC. No new impacts to heritage values directly related to livestock grazing would result from a continuation of the current permit terms and conditions. The impacts of livestock grazing on heritage resources have been disclosed in prior NEPA analyses, as described below in the screening section for Cultural Resources.	D. Kiel	12/07/07
NI	Cultural Resources	No new range improvements or changes in the licensed grazing use are proposed for these three allotments; no new projects or changed uses would affect cultural resources, including sites listed to or eligible for listing to the National Register of Historic Places, under this proposal. Impacts on archeological and historic period resources that could be linked to livestock grazing on public lands in	D. Ferris-Rowley G. McEwen	12/11/07

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		<p>Washington County were disclosed in two prior EISs: the Hot Desert Grazing Management EIS (BLM 1978) and the St. George RMP/EIS (BLM Draft EIS 1995, Final EIS 1998). Livestock grazing has been an historic use of public lands since the mid-19th century. The prior EIS analyses concluded that very concentrated livestock activities, such as might occur near water sources, along fences or in areas where livestock seek shade and shelter, could damage or destroy the integrity of some types of cultural resources. The documented impacts on sites from livestock trampling, and trailing included damage to or the destruction of architectural features, artifact displacement and damage, soil compaction that could affect the integrity of cultural deposits. Livestock rubbing has also been documented as an impact on rock art panels.</p> <p>The timing, intensity, and duration of effects from livestock grazing on archeological sites has been difficult to assess, since baseline data on sites and site conditions were not collected by BLM until after the passage of federal heritage preservation laws in the 1970s. Many areas of public land in Washington County have yet to be inventoried by professional archeologists to identify and document cultural resources. However, it can be asserted that a majority of the livestock-related impacts on cultural resources probably occurred prior to the passage of the Taylor Grazing Act in 1934, when livestock numbers were much higher and overgrazing necessitated federal intervention in the management of grazing on public rangelands. Over the past 75 years, federal management of grazing allotments has focused on improving rangeland health conditions, through the reduction of livestock numbers and improving the distribution of livestock within pastures, to avoid concentrated livestock use. Today, a majority of the allotments managed by BLM in Washington County are licensed for less than 11 head of livestock, greatly lessening the potential that concentrated livestock uses could damage the integrity of archeological sites.</p> <p>All new range improvement projects, including fences, water facilities, and vegetation manipulations, are subject to a Class III inventory to identify historic properties within the project area and assess project-specific effects on these properties. Where adverse effects to eligible properties cannot be avoided, consultations under Section 106 of the National Historic Preservation Act are conducted with the Utah State Historic Preservation Officer, American Indian Tribes that claim cultural affiliation to the area, and other interested parties to develop appropriate mitigation measures, such as data recovery.</p> <p>BLM conducts field investigations and maintains a database of archeological sites on public lands within the allotments. Regular site monitoring is conducted by BLM archeologists, law enforcement rangers, and trained site stewards, to detect vandalism and evaluate site conditions. Special management</p>		

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		actions are taken when resource damage is noted. Since effects to cultural resources related to livestock grazing at current levels have previously been adequately disclosed in prior EIS level documents; the Proposed Action does not include new range improvements or changes in grazing management strategies that could create new or adverse effects to historic properties within the allotments; and BLM regularly monitors the condition of historic properties within the allotments to detect changes, including those that could be linked to livestock grazing, no further analysis of this critical element will be completed in this EA. (Concurrence indicated by John Herron, archeologist, Arizona Strip Field Office, BLM)		
NI	Environmental Justice	No disproportionately high or adverse health or environmental effects would impact low income or minority populations as a result of authorization of the Proposed Action or alternatives. The Proposed Action would continue to authorize livestock grazing on remote public lands and would not generate environmental justice issues.	D. Ferris-Rowley	1/08/08
NP	Farmlands (Prime or Unique)		D. Corry	12/17/07
NP	Floodplains		D. Corry	12/17/07
PI	Invasive, Non-native Species	Scotch thistle infestation occur on the Goat Ranch Allotment, invasive warm season grasses (Bromus sp) are found throughout the allotments.	K Leany	11/30/07
NI	Native American Religious Concerns	No Native American religious concerns have, to date, been identified in relation to livestock grazing on public lands in Washington County or within this specific allotment, during consultations conducted by St. George Field Office with the Paiute Indian Tribe of Utah, its respective Bands, or other American Indian Tribes that claim cultural affiliation to southwestern Utah.	D. Ferris-Rowley	1/08/08
NP	Threatened, Endangered or Candidate Plant Species	No Threatened, Endangered, or Candidate plant species occur in the project area	R. Douglas, SGFO Lee Hughes ASDO Lisa Church KFO	01/09/08
PI	Threatened, Endangered or Candidate Animal Species; Migratory Birds	California condor (Federal Endangered Species) and Mexican spotted owl (Federal Threatened Species) may infrequently use the project area for hunting and foraging. No nests, roosts, or special use areas for California condor or Mexican spotted owl are known to occur in the Goat Ranch, Cottonwood, or Cane Beds Allotments. Designated critical habitat for Mexican spotted owl exists in the western portion of the Goat Ranch Allotment. Even though this area is designated critical habitat, the area provides few opportunities for nesting due to the flat terrain, and lack of canyon habitat. There are several canyons within the Cane	R.Douglas, SGFO Tom Denniston ASDO LisaChurch KFO.	01/09/08

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		Beds Allotment (Arizona) which have been identified as having potential for Mexican spotted owl nesting (MSO 2000 model, Utah Division of Wildlife Resources, 2000). These areas are located in the Cottonwood Spring #1 Canyon, and the canyon east of Cottonwood Point. Because these canyons are extremely steep with cliffs, they are not accessible to livestock, and therefore, not impacted by livestock or grazing use. From the rangeland health assessment completed within these allotments, it was determined that all sites were functioning properly (Summary on file at St. George Field Office). It was also determined that the ecosystem (hunting, and dispersal habitat for condor and Mexican spotted owl) met the Utah and Rangeland Standards and conformed to all the Grazing Management Guidelines. Under the proposed grazing schedule, the vegetation within these allotments should be properly utilized by livestock and maintained in good condition, providing good habitat, and adequate prey species for condors and Mexican spotted owls. The maintenance of fences, waters, and other livestock operations should not cause significant disturbance to these species or their habitat. The Proposed Action may affect, but is not likely to adversely affect the California condor or Mexican spotted owl		
NP	Wastes (hazardous or solid)	No known issues	R Schreiner	12/11/07
NI	Water Quality (drinking/ ground)	Improper livestock grazing practices can impact water quality, however within this group of allotments all five springs were found to be in proper functioning condition. Three of the five springs, Goat Spring, Stateline Spring and Maiden Hair Spring, have no live (surface) water at the source. Stateline and Maiden Hair Springs have been developed and are piped to existing private homes, limiting the potential for surface or groundwater quality to be impacted by activities at the spring sources. No water quality samples were collected at any of the springs; however the condition of the riparian areas on those springs not impacted by development would suggest that surface water quality is not being impacted at those sources by livestock grazing.	D. Corry	12/27/07
PI	Wetlands/ Riparian Zones	There are no rivers or streams within the allotments. Five springs occur within this group of allotments including: Goat and Cappies Rock Springs on the Goat Ranch Allotment, Stateline and Maiden Hair Springs on the Cottonwood Allotment; and Cottonwood Spring on the Cane Beds Allotment. Three of the five springs (Goat Spring, Stateline Spring and Maiden Hair Spring) have no live (surface) water at their sources. Stateline and Maiden Hair springs have been developed and are piped to existing private homes, limiting the potential for riparian communities to be sustained around the spring sources. Recent health assessments indicate that at the two other springs with surface water at the sources, riparian areas were in proper functioning condition. The number of cattle and season of	D. Corry SGFO Lisa Church KFO	12/27/07

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		use appear to be acceptable to achieving a static to upward trend in the riparian zone. See individual riparian reports for specific information.		
NP	Wild and Scenic Rivers	There are no Wild and Scenic River segments classified as designated, eligible, or suitable within the project area.	D. Kiel	12/07/07
NI	Wilderness	In Utah, there are 2,035 acres of the Canaan Mountain WSA within the Goat Ranch Allotment (53% of the total allotment acreage). The Cottonwood Allotment also contains acreage within the WSA. In Arizona, 604 acres of the Cottonwood Point Wilderness are within the Cane Beds Allotment (22% of the total allotment acreage). Because no range improvements are proposed, and because the Wilderness Act of 1966 identified livestock grazing as an historic and valid existing use of wilderness areas, no impacts to the wilderness character of this WSA would result from implementation of the Proposed Action or alternative.	D. Kiel	01/15/07
OTHER ELEMENTS				
NI	Rangeland Health Standards and Guidelines	Health assessments found that the allotments are meeting S & G's	K Leany	11/30/07
PI	Livestock Grazing	Permit renewal is required to allow the continued livestock use on these allotments.	K Leany	11/30/07
NI	Woodland / Forestry	Continued livestock use would not affect this resource or programs.	K Leany	11/30/07
PI	Vegetation	Rangeland health assessment indicated that rabbitbrush dominates the vegetative community in the Broad Hollow area of the Goat Ranch Allotment. Factors that may have contributed to this situation, including the impacts of recreation uses, should be analyzed in the EA.	K Leany	11/30/07
NP	Special Status Plant Species other than FWS candidate or listed species	BLM State Sensitive Plant Species (both Utah and Arizona) do not occur in these allotments.	R. Douglas, SGFO Lee Hughes ASDO Lisa Church KFO	01/09/08
PI	Fish and Wildlife Including Special Status	The following Special Status Species (SSS) may/do occur in the Goat Ranch Group of allotments (Utah and/or Arizona): Burrowing owl (permanent resident, uncommon), Ferruginous hawk (permanent resident, fairly common), Allen's big-eared bat (permanent resident, extremely rare), Big- free-tailed bat (summer resident, rare), Fringed myotis (permanent resident, uncommon), kit fox (permanent resident, uncommon), Long-eared myotis (permanent resident, or summer resident, fairly common), Long-legged myotis (permanent resident, fairly common), Northern sagebrush lizard (permanent resident, fairly common), Spotted bat (permanent resident, rare), Townsend's big-eared	R.Douglas, SGFO Tom Denniston ASDO LisaChurch KFO.	01/09/08

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		bat (permanent resident, fairly common), Western red bat (permanent resident, extremely rare), and Western small-footed myotis (permanent resident, uncommon). No nests, dens, roosts, or other special use areas for these SSS have been identified in these allotments. Wildlife that typically would be found in this area include: badgers, antelope ground squirrels, kangaroo rats, deer mice, desert wood rats, mourning doves, common ravens, wrens, house finches, side-blotched lizards, and Western whiptails. Infrequently, larger animals such as raptors, coyotes, gray fox, and mule deer may pass through the area.		
PI	Soils	Some soil disturbances occur around water sites where livestock gather and where they trail. These impacts should be evaluated in the EA, and a map of soil types included in reference to assessment locations.	D. Corry	12/17/07
NI	Recreation	Because no range improvements and no changes to the permit are proposed, impacts on recreation uses are expected to continue to be negligible.	D. Kiel	12/18/07
NI	Visual Resources	In Washington County, with the exception of two small areas of VRM Class I at the southern end of the Goat Ranch Allotment, the allotments are VRM Class II. In Arizona, the Cane Bed allotment is within the Cottonwood Point Wilderness, which is VRM Class I. Because no range improvements are proposed and no changes in grazing management are proposed, therefore, no new impacts to visual resources are anticipated.	D. Kiel	12/07/07
NI	Geology / Mineral Resources / Energy Production	No known issues	R Schreiner	12/11/07
NI	Paleontology	No known issues.	R Schreiner	12/11/07
NI	Lands / Access		K. Abbott	12/11/07
NI	Fuels / Fire Management	No hazardous fuel reduction or fuels management projects are proposed for these areas. Continued livestock use would not affect fire mgt, other than the continued reduction of some light fuels through livestock grazing.	K Leany	11/30/07
PI	Socio-economic Values	Permitting of livestock grazing on public lands confers some economic benefits to the individual permit holders and to the regional agricultural economy. Social benefits would also be realized, allowing the continuation of an agricultural activity that has been an important component of traditional lifestyles in southwestern Utah since the mid-19 th century.	D. Ferris-Rowley	1/08/08
NP	Wild Horses and Burros	BLM does not manage wild horse and burro herds in Washington or Kane Counties; in Mojave County, a herd area is managed, but not within the Cane Beds Allotment.	K Leany	11/30/07
NP	Lands with Wilderness character	Lands within the Goat Ranch Allotment were included in the Utah Wilderness Coalition Wilderness Proposal. However, the 1999 Utah Wilderness Inventory evaluated that portion of	D. Kiel	12/07/07

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		the allotment that is outside the existing Canaan Mountain WSA as not having wilderness characteristics.		

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
NEPA / Environmental Coordinator	Dawna Ferris-Rowley	4/3/08	
Authorized Officer			